NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. XI. BOSTON, AUGUST, 1859. NO. 8.

NOURSE, EATON & TOLMAN, PROPRIETORS. OFFICE...34 MERCHANTS ROW. SIMON BROWN, EDITOR. FRED'K HOLBROOK, } ASSOCIATE HENRY F. FRENCH, } EDITORS.

CALENDAR FOR AUGUST.

"The Dog-Star rages."

AUGUST, like every other month in the year, has its distinctive peculiarities. JULY may have been hot, but now the pavements seem to glow with an intense heat, the rows of brick houses throw back the rays of the vertical sun, unrelieved by a single shadow—the trees are covered with dust, and you breathe in an atmosphere which seems to arise from some fiery furnace. The omnibus horses, which never have a vacation, still plod along, looking dejected and unhappy, and you are inclined to believe that in this form, some poor human soul is working out its second probation. Saving said omnibus horses, business men, and the dwellers in lanes and back streets, the city is well nigh emptied of its inhabitants.

Let us follow the multitude, and flee into the country. Even here the freshness of summer has departed. The grass which was waving so gracefully a few weeks ago, is lying in heaps, while the hay-caps scattered over hill and valley, look like the tents of a Lilliputian army. The sun sinks down in the West, and rises again in the East, with the same lurid glow. He is entirely shorn of his beams—a mere red ball of fire. Listen, and you will hear the grasshopper singing from morning to night, as he vaults gaily about among the short grass. He enjoys himself, and would not give a fig to have it cooler. The robin and the thrush still sing in the woods, but the whippoorwill, whose plaintive note is the sweetest of all, we shall hear no more till another summer. He only comes out in the night, and there is a superstition that he foretells death or misfortune to any household he may visit. Like most other superstitions which are handed down from one generation to another, it is difficult of proof—for we have known him to serenade a whole village night after night—enough to have foretold a pestilence at least, and yet nothing unusual seemed to follow.

Down in the meadow and by the brook, you will find the cardinal flower, which takes its name from its brilliant scarlet blossoms,—and the clematis now trails its vine over the alder bushes by the way-side. The May flower, the June pink, the cinnamon rose, the damask and the blush, have all had their day. The apple tree hung out its blossoms, and the horse-chestnut put on its thick, green leaves and gorgeous flowers, grew furiously for a few weeks, and then settled quietly down for the remainder of the summer—so that even now, while this glowing heat is upon us, there are many voices that tell us summer is going—sad voices they are too—who ever listened to them,

"Nor cast a longing, lingering look behind?"

A few words about the horse-chestnut, by the way. It is in reality a hardy tree of rapid growth, but it has not the aspect of a citizen of New England. When in full bloom, it has the appearance of a huge bouquet of tropical flowers. It is, moreover, even when in its proper place, standing alone on some hill-side, or open place of an extensive lawn, entirely ornamental, its fruit being bitter and uneatable. Fifty years ago, in some portions of the country, every house had its row of poplars, but either from the fact that it is naturally a short-lived tree, or because our climate did not agree with them, they began to die out, and to look ragged and old. Now you will scarce-

ly find a solitary specimen any where. In their places are elms, maples, horse-chestnuts, &c. People say the poplar is not a graceful tree. True, it has a firmness of aspect not in accordance with modern ideas of expansive luxuriance, but how perfectly it seems adapted to the early days of New England, when little children were duly washed, whipped, and catechised every Saturday night—were taught to make courtesies to passers-by, and, tradition says, to say "yes sir," and "no sir," to their elders! Then ladies wore skirts without gather or plait, and bonnets that actually covered their heads. But a time of greater latitude in dress, manners and morals came about, and the old tree fell out of place, and quietly stepped out, with the good old grandmothers who used to sit under its branches. It may be a precise, puritanical tree, but there are some in whose eyes it will always be beautiful—to whom it will tell more tales than the fabled leaves of the Sybil. South of us, on some of the old estates of Virginia, the poplar may still be seen, broken and decayed, fitting monuments of the old aristocratic families who planted them.

Doubtless, the march of improvement is onward, but it is not without a pang that one sees the ancient land-marks removed. It is astonishing how quickly, now-a-days, customs are transferred from the heart of life and business to the extremities of the great body of humanity. We have in our mind a certain village away up among the hills of New Hampshire. The nearest railway station is six miles distant, and the steam whistle comes softened and modified through the forests, till it loses its harsh, business-like sound—here the very birds are suffered to sing nothing newer than "Old Hundred" or "St. Martin's," and from time immemorial the same white houses with green blinds have gleamed picturesquely among the abundant foliage; but this summer we took a look at this conservative spot, and behold, the old tavern-stand, which had stood a hundred years, looking meekly out of its dormer-windows upon the world below, has come out in a new fawn-color suit with dark trimmings! Should the ghost of its builder, who lies near by, come out to view his possessions, some moonlight night, what a surprise awaits him!

"O! tempora, O! Mores," won't they leave us a spot anywhere "sacred to the memory" of old associations! Must civilization go ruthlessly striding over our hills and valleys, building up and levelling down till the world is all made after one pattern?

Bayard Taylor says—"Pianos in Lapland, Parisian dresses among the Lofodens, billiard-tables in Hammerfest—whither shall we turn to find the romance of the North!" Already the "glowing fireside" has become a tradition, and the "chimney corner" and the "old arm-chair" only pleasant figures of speech.

With the loss of some things which seem poetic and picturesque, however, we have, undoubtedly, many comforts of which our fathers never dreamed. There is a greater attention to the beautiful in-doors and out, and with increased facilities for performing mechanical labor, we must find more time for its cultivation.

It is not wise to hamper one generation too much with the notions of the preceding—for, to close in the same spirit with which we commenced, "Every dog must have its day."

For the New England Farmer.

IRON OR METALLIC BARRELS.

A few nights since, while nearly all the people were in their deepest slumbers, fire was discovered in an eating-saloon, No. 25 Ann St., New York, caused by ashes put into a wooden barrel, the day or evening previous. My attention of late has been called to several instances of the same kind. To my mind, many subjects of less importance are brought before the public, while this is left unnoticed, although of the utmost consequence to the safety of our lives and property. Why should we suffer such a devouring enemy as fire to moulder and feed among the ashes contained in a vessel suited to its element, ready to break out in the stillness of the night, and threaten such fearful consequences? Have we not learned to confine the lions and tigers in iron cages, and with iron chains, where they cannot gnaw and break away? Should we not then do so with that monster who serves us well when controlled, and is so destructive when allowed to reign?

I have often noticed, when walking through the streets of New York and Boston, good coal and ashes together, set out for the city carts, in wooden barrels and vessels of a combustible nature, with now and then an iron barrel, made so thin and weak, without being guarded and strapped, that it will not sustain its own weight, while being emptied over the rave of the cart. In such a city as this, subject every moment to conflagration, we ought to have every means of safety and good order preserved. Suppose every person be provided with a good iron barrel, with name and number printed on it, and they keep their ashes in nothing else, how long would it be before a handsome dividend would be remitted from their insurance policies? Please inform us where such are made, and the best kind of sifters suited to them.

A Friend to Saving Life and Property.

Melons, Cucumbers, etc.—These are materially improved by pinching off the runner bud after the third rough leaf has been formed. This practice will always insure a number of young shoots instead of a few, and the fruit sets early and near the centre of the hill so as to perfect itself, instead of giving small results at the ends of straggling long vines.—*Working Farmer.*

For the New England Farmer.

LETTERS FROM MAINE—No. 1.

As the *New England Farmer* is fast growing into favor among the farmers of Maine, I wish to make it a medium of communication for some facts—the result of experiment and observation—which may be both interesting and useful.

I will begin with some observations more particularly applicable to the latitude of Maine, than to that of Massachusetts, but the facts I shall record may suggest a test of certain theories and principles relative to fruit culture, which would be more likely to escape notice in a warmer latitude, and which may still be of essential importance to the fruit culturist in the location of milder winters.

The last winter has proved to be a disastrous one to fruit trees in the interior of Maine. Not that the average coldness of the winter was in any sense peculiar or remarkable, but from the fact that on the intervales, and generally in the valleys, in all the central and northern parts of the State, on one occasion, the mercury sunk to the point of congealation, 40° below zero.—This circumstance affords an opportunity to test the capacity of different varieties of fruit trees to resist the effects of climate. It may likewise enable us to decide what varieties may be generally ventured upon with safety.

The past winter has proved that the Baldwin is the most tender variety of the apple yet introduced into general cultivation in Maine.

Some ten or fifteen years since, the universal popularity of the Baldwin apple induced its widespread introduction into the State. It was introduced by grafting on the tops of trees that had attained maturity, and the first observed results seemed to promise unlimited success. Nor has this part of the experiment, up to this time proved a failure, for immense sums of money have been brought into Maine, for Baldwins exported which have been produced on new tops furnished to old trees.

But notwithstanding the measure of success which has attended this experiment, orchardists have suffered material loss by the winter-killing of one after another of the branches, and occasionally of whole trees. This has been generally attributed to too hard pruning. And undoubtedly thousands of valuable trees might have been saved if more science had been called into requisition in pruning; but the past winter has proved that no care in this respect can prove an absolute security for the Baldwin in our high northern latitude. Excessive pruning always endangers the winter-killing of the tree, and in proportion to the coldness of the climate. A tree in New Jersey will receive no injuiry from the pruning that would invariably prove fatal in Maine, and one of the lessons I wish to impress upon the reader, is that less interference with nature must be practiced as the fruit culturist approaches the north. A much larger amount of leaves are required to mature the sap for resisting the frosts of high northern latitudes, than is found to be necessary where frosts are less severe. Hence in all attempts to cultivate less hardy varieties of fruit in colder regions, much caution must be used in pruning so as to reduce the quantity of leaves.

Another fact, proved by observation is that the Baldwin is less liable to winter-kill when grafted at a considerable hight above the ground, and on the slowest growing trees.

In fact all attempts to raise new orchards from Baldwin trees grafted at or near the ground are likely to prove failures in all parts of Maine. The last winter has destroyed tens of thousands of Baldwin trees in our state, and swept off almost the whole Baldwin departments of nurseries, while many other varieties have escaped in the same locations, bidding defiance to the temperature that causes mercury to congeal.

Money enough has already been sqandered in the attempt to raise young Baldwin orchards in this State, and we must either seek a substitute in some hardier variety, or lose most of the benefit to be derived from the crop second only in importance to one other of the crops of our latitude.

In my next I propose to detail some observations npon the relative capacities of different varieties of fruit trees to resist the extreme temperature of winter.

SANDY RIVER.

For the New England Farmer.

THE SEASON—ONIONS—STRAWBERRIES.

MR. BROWN:—*My Dear Sir*,—The last week of May and three days of this month, the 1st, 3d and 4th, have been abundant in rain, with chilly east winds, and on the night of the 3d and 4th there were two drenching thunder showers, the lightning frequent and vivid, and the thunder powerful. Yesterday, the 5th, required overcoats out doors, and fires within. The thermometer at 4½ o'clock this morning, 6th June, stood at 35° and white frost was seen on the top boards of fences, but vegetation has here been uninjured. The prospect for grass and spring grains, thus far, is promising.

Accidentally I have found strawberries flourish best upon a stony, gravel bed, south of a stone wall terrace. The adjacent ground was cleared of pebble-stones, thrown and raked up to the wall, and then levelled for a walk of two feet in width. Finding that a row of strawbery plants might be inserted at the foot of the wall, I placed them in that unpromising position, to take care of themselves, if they would, but hoping little from them, stones alone being their companions. They took root and produced some fruit, and from year to year extending their runners, they formed new plants among the stones by sending down roots from the joints of the runners, in the interstices of the stone-pebble walk, till the surface was nearly covered. No grass or weeds interfered with their growth, and the size and amount of the fruit now exceeds that which I can raise, upon the same area, elsewhere upon my premises, and it matures a week earlier than in other positions. The ground cultivated, above the terrace, with roots and peas, descends gently to the terrace wall, and rains wash rich, manured soil in some degree into the pebbled bed below, and this doubtless feeds the strawberry roots. Yet I am satisfied that if a gardener has such an amount of pebble stones that he hardly knows how else to dispose of them, he may, by a moderate intermixture of rich earth, form them into productive strawberry beds. The propagation of the plants by the runners whose roots *will get*

into the earth, among obstacles that impede weeds and common grass, is a fact very observable, and one that can be turned to good account, in given localities.

For one or two seasons past, an inexplicable blight of my onion crop has come on when the tubers are but half-grown. The best manuring and tillage of mine does not prevent it. It comes on in August, with a decay of the tops of the plants, when the extremities turn white. This symptom extends to all the crop, and increases, till the tubers cease expanding, and their tops wither down and die. The onions gathered rot in the winter, and few remain sound till spring, whether traced up, or spread out in the cellar. These facts I have not seen stated in the *Farmer*, and therefore mention them, that if they have been witnessed by others, they may, peradventure, be explained, and the cause and cure be assigned.

The apprehension that a species of butterfly, observed in the summer of last year, a specimen of which I sent, was parent of a destructive forest insect, a migrating worm, that infested our forests in 1857, was happily not verified by observation. Still, numerous worms appeared upon our hard maples, in our street, and consumed the foliage fast, in August. They seemed not travellers, like those of the preceding season, and generally were seen more clustered together. They disappeared earlier than those of 1857, and our friends, the chipping birds, were so numerous and industrious, that very probably they stopped their depredations.

Many cherry trees decay here; peaches are despaired of, and for some cause, vines, the Isabella especially, are greatly damaged by the winter.

Salisbury, Conn., June 6, 1859. J. LEE.

For the New England Farmer.

COST AND PRICE OF MILK.

At a recent meeting of the Lexington Farmers' Club, the question under discussion was whether pure milk could be afforded in this town for less than 25 cents per can. The general impression was that it could not be afforded at that price in winter, but none had exact estimates as the result of experiments, except Messrs. Reed and Fessenden.

Mr. N. Reed had made a trial with 20 cows by carefully ascertaining, one day in each week for three successive weeks, the amount of provender fed to them, and also the amount of milk produced by them, and by dividing the amount by three he obtained the mean result for one day as follows, viz.:

	Estimated value.	*Estimated value.*
Oil Meal, 30 lbs.	$,54	$,54
Shorts, 43 lbs.	,43	,43
Fine Feed, 20 lbs.	,27	,27
Roots, 5 bush.	1,00	1,00
English Hay, 300 lbs.	1,95	2,40
Meadow Hay, 200 lbs.	,60	,60
Depreciation of stock, 22c ₱ day.	,22	,22
Interest and taxes, 15c ₱ day...	,15	,15
	140) 5,06 (,036 ₱ qt.	140) 5,61 (4
	7	7
Per can.	$,252	$,28

The amount of milk produced in one day was found to be 140 quarts. It will be perceived that there are two estimated values of hay given, the highest of which is less than the present current value.

Mr. N. Fessenden made a trial with 5 cows for one day, fed as usual, with the following result. The provender consumed was,

English Hay, 86 lbs., at $17 ₱ ton.	$,73
Salt Hay, 20 lbs., at $11 ₱ ton.	,11
Oil Meal, 9 lbs., 1½ cts. ₱ lb.	,13
Rice Meal, 8 lbs., 1¼ cts. ₱ lb.	,10
Husks, quantity and value guessed at.	.08

25) $1,15 (,046
7

Per can. $822

The quantity of milk produced was 25 quarts. The mean time since dropping their calves is 8 months. Three will come in again in a mean time of 4 months; the other two are farrows.

LEXINGTON.

For the New England Farmer.

MASSACHUSETTS SOCIETY FOR PROMOTING AGRICULTURE.

BY JUDGE FRENCH.

When a man has lived so long and so faithfully, in this thankless world, that he has become, at length, content to labor quietly and constantly, to promote the welfare of his fellow-men, receiving and expecting no other reward than that which an approving conscience may afford, he has become once more "but a little lower than the angels." As the elder Mr. Weller remarked, by way of consolatory reflection, on the death of his wife, such a person is almost "too good a *creetur* for this place," and might be translated with no great change to a better sphere.

It is true of most machinery that the more perfect its workmanship, the less noise it makes. It is the friction, and not the power, that attracts common notice. The big engine that propels the ocean steamer Vanderbilt, with a power equal to that of thirty thousand horses, makes less noise than a single, idle, braying jackass.

> "Stillest streams, oft water fairest meadows,
> And the bird that flutters least,
> Is longest on the wing."

The Massachusetts Society for Promoting Agriculture, ever since the 7th of March, 1792, has been modestly, quietly, but steadily keeping the even tenor of its way, like the steamship, regardless of the shifting breeze and the inconstant waves, straight onward, by her compass. And now at the end of almost threescore years and ten of its life-voyage, we have an abstract of its log-book, in a modest pamphlet of 149 pages, from the hand of its accomplished secretary, RICHARD S. FAY; given to the world, not in a spirit of boasting, to show how much good this Society is now doing, or proposing to do, but rather as a memorial of the worth and unselfish labors of those who have "finished their course" on earth.

So little was known of the operations of this Society, that at a public meeting at the State House, in Boston, on the 5th of February, 1857, for taking measures to form a new State Agricultural Society, one gentleman said of it, that "it had a respectable existence, he believed, in State Street, and was likely to be a money-making concern. The State paid it $600 a year, and some said it was spent in good dinners!" A very brief discussion, however, dispelled all such delusions, and it was unanimously voted inexpedient to form a new society. A decent respect for the dead, as well as the living, seemed then to demand of the Society some exposition of its transactions, and we have in this little volume, in a simple statement of facts, a vindication of its course, alike creditable to the present and former members of the Society, and to the country.

For nearly seventy years, men of the highest social and political position, in aristocratic Boston, and neighboring towns, men whose time and business talent could coin them money in all departments of life, have laid aside their everyday cares, and met regularly, to take counsel together, for what they rightly deemed the great and fundamental interest of their country. Among the great names of early members of this Society, we find SAMUEL ADAMS, JOHN LOWELL, FISHER AMES, THOMAS RUSSELL, CHRISTOPHER GORE, JAMES SULLIVAN, MARTIN BRIMMER, THEODORE LYMAN, THOMAS L. WINTHROP, AARON DEXTER. In 1805, JOHN ADAMS, ex-president of the United States, was chosen President, in place of Gov. STRONG, and DUDLEY TYNG and JOSIAH QUINCY were elected trustees.

In 1821, Rev. Mr. COLEMAN delivered the address, and the next year, Col. TIMOTHY PICKERING rendered the same service. In 1828, Hon. THOMAS L. WINTHROP was elected President, and Col. THOMAS H. PERKINS a Vice President. Further on, we find among the officers, PETER C. BROOKS, Dr. JAMES JACKSON, DANIEL WEBSTER, ELIAS PHINNEY, J. P. CUSHING, JOSIAH QUINCY, Jr., Dr. JOHN C. WARREN, ABBOTT LAWRENCE and EDWARD EVERETT. GEORGE W. LYMAN was President in 1858, and CHARLES G. LORING and ROBERT C. WINTHROP, Vice Presidents, THOMAS MOTLEY, Jr., Treasurer. It is doubtful whether the records of any agricultural society in the world can show a list of more distinguished names among its officers. And its records of what it has done, are worthy of the names of its members. An article by the editor, in the monthly *N. E. Farmer* for March, 1859, gives a list of some of its more important premiums, and notices its valuable importations of live stock of approved breeds, from time to time, commencing with Merino sheep in 1802, including Hereford and Alderney cattle.

In 1820, it appears that a stallion of the breed known as the Suffolk Punch, bred in England, was presented to the Society. Of this breed of horses, we had an excellent opportunity, while in England, to form an opinion, which has been already expressed in this paper. Our belief is, that the world does not afford another breed of horses, so well adapted to farm labor and general purposes of heavy draft, as the Suffolk Punch, and we have some curiosity to know what has become of the posterity of this horse.

Verily, there is nothing new under the sun. In this record, in 1801, we find a proposition for holding market fairs "on Cambridge Common," in May and October, and this seed has just vegetated, after fifty-eight years, into market fairs in Essex county, which will now spring up everywhere, with great advantage to the farmer.

In 1800, a seed-sowing machine was exhibited to the trustees. In 1812, the model of a double plow was ordered to be procured.

In 1827, a letter was received from N. BIDDLE, Esq., of Philadelphia, describing a mowing machine.

In 1820, a *pistol* was exhibited, so constructed as to discharge seven balls successively, with once loading and priming, but the committee say that they do not deem themselves authorized to recommend any premium for it, "it not being an instrument of use in agriculture, and having no certificate of its having been used and improved by any practical farmer!"

Corn-shellers, straw-cutters and threshing machines were shown and discussed nearly a half century ago, in this Society, and a hay-making machine was presented to the Society in 1823, an implement which we have seen at work in England, and which should, and soon will, be found on every hay farm in our country.

There is hardly a new implement that has been introduced, or a valuable breed of animals, or a new and valuable plant or root or seed, or a hint as to a plan for aiding the interests of agriculture in any way, that may not be traced back to the influence of this Society.

From time to time, men who are "tired of hearing Aristides called the Just," have cried out against its members, as book farmers, and gentlemen farmers, and as an aristocracy, and nobody can deny that all these appellations belong to them. For ourselves, we have no antipathy to books or gentlemen, and only wish the aristocracy of learning and benevolence and public spirit could be largely increased in numbers.

The commonwealth of Massachusetts is the model State of the world, at this moment. Nowhere is she excelled in the general edification of her people, in the true spirit of freedom in the hearts of her citizens, in the equal and just

administration of law, in liberality towards the poor, the blind, the deaf, and the unfortunate of every class, or in general prosperity in every branch of business. In fostering the interests of agriculture, she stands at the head of the States of our Union, doing for the rest what less ability or enterprise prevents their doing for themselves.

Long may the old Massachusetts Society continue to prosper, diffusing, through the press and the quiet example of its members, the light of science by which alone all progress is securely made.

For the New England Farmer.

SANDY LANDS—MUCK—THE "SKINNING" METHOD OF FARMING.

In what is called the Connecticut valley, between the Connecticut and the gneitic hills some ten miles to the east, is a large tract of light, plain land, about which, and its management, I propose to say a few words, especially that in this State, south of the green-stone range of Holyoke and its sister mountains. Geologically, it is drift, overlying new red sandstone, which sometimes crops out, or is within a few feet of the surface. The soil is naturally thin, and the timber principally pine, except along streams and occasional hills, where the ground is more moist, and the subsoil a red, hard-pan. Dryness at all seasons of the year is a characteristic of this soil; and in summer, after a rain or a heavy shower, the farmers can resume their hoes within a few hours, with but slight inconvenience from moisture; but notwithstanding this, no land is found that suffers less during a drought.

These plains are generally divided into farms of seventy-five to one hundred acres, and devoted largely to the raising of grain, rye and corn; thirty acres in each crop being not unusual, with the larger farmers. The yield is not large; from five to twelve bushels of rye per acre and fifteen to twenty of corn; but the land tills easy; so that a man can easily hoe from one to two or three acres a day; at least it is passed over, but, perhaps, sometimes "hoed at" rather than hoed.

The present condition of these light plains, under their present management, does not present a very flattering prospect for the "rising generation." "Money" not only "makes the mare go," but with the New England Yankee, is, to a far too great extent, the great incentive of life. Under this spur, the high price of wood in this vicinity for the last five or six years, has induced the cutting off of hundreds of acres of wood every winter, until the market became clogged with the article; but not, we are sorry to say, till the greater part of the woodland has been cut over; nearly all the old growth; and now the effects of the north-west wind, as it sweeps across the knolls, is seen in bare sand-blows, which every fall and spring are increased in size. The land where the wood was cut, not being allowed to grow wood again, because it requires time, is broken up, and two, three or more crops of rye, and one or more of corn or millet, are successively taken off, when it is permitted to rest a few seasons. The older land is now much worn, and when too poor to grow corn and rye profitably, is devoted to buckwheat. We see no reason why, eventually, the whole of these plains, will not be reduced to near barrenness, if this system of improving them (rather misimproving) is continued; namely carrying away the crop, and returning nothing to the land, which well deserves the epithet of the "skinning system." The grain is sold, and generally but little more stock is kept than is necessary for convenience, so that manuring extensively is out of the question. These plains are happily interspersed, however, with brooks, runs, and low plats, besides now and then a hill, with the hard-pan subsoil before mentioned, which furnishes all the mowing-land, and accordingly receives the manure.

There are generally taken from the plain-fields two crops in every five or six years, which, of course, draws severely upon the natural resources of the soil, originally scantily supplied with vegetable matter, and nothing is done to restore it again. This land, on account of dryness of the surface, is hard to stock with clover, or the grasses, and unless the season is unusually wet, the seed sown is generally wasted. Hundreds of acres I have in mind, which, when not in crops, are covered with weeds, wild, useless herbs, and the low briars, *(rubus canadensis;)* these, decaying on the ground, are all the nourishment received by the land.

That this system of farming "pays," as a present investment, is not doubted by those engaged in it; but that they do not sometimes think of what it must lead to is quite improbable; still, guano is often applied, and though it generally produces larger crops, undoubtedly draws the harder upon the land.

It seems to be a settled fact in people's mind, at least hereabouts, that manuring on dry, sandy land hardly pays, and though it works quick, and produces satisfactory crops, immediately after its application, it does not seem to last in the land. And again, such a large surface of land is improved each season, that it is next to an impossibility to manure it all; but doubtless it would be better, taking into account the continued cropping to which the land must be subjected, to commence the business of permanently improving these soils, and raise more grain on half the ground.

Nature has supplied the necessary means, in large reservoirs of muck, in pond-holes, conveniently interspersed, and accessible, either by drainage, or in dry weather, and large beds of peat, in many of the swamps. Some farmers here, we are happy to say, are beginning to appreciate these mines of wealth, and have commenced the application of muck to their sand-knolls, but generally, merely as experiments. One hundred and fifty loads to the acre, on the poorest of these sandy fields, would produce a good soil, that would produce double, and even treble the crops it now does, and last, probably, with judicious management, ten or a dozen years, without further outlay, or good crops of grain, every season, for five years. The muck can be drawn at any season of the year, when there is leisure, by a little calculation before hand. According to the old saying, "Where there is a will there is a way;" but if where there was a way

there was a will, in this matter of muck versus sand-blows, two or three acres might be thus improved by almost any farmer, every year.

In conclusion, I will briefly give a history of an experiment in this line, though I cannot give as precise data as I would like. Some six years ago, in converting an alder-swamp into mowing-land, I had occasion to bog considerably, taking off the whole crust an inch or two in depth between the bogs. This crust, consisted, in part, of grass bogs, but principally of loose hammocks, abounding in brake roots, or "nigger-heads," as commonly called. An acre of meadow was treated in this manner in August, and the bogs packed into heaps, and in the following winter, were drawn to a sand-knoll, some thirty rods distant, covering about the same surface there. In the following spring, the bogs were plowed under as well as possible, and the land planted with corn. The crop was more than treble the usual yield of the land, and the succeeding rye crop was bountiful, far exceeding the yield of the remainder of the piece, which, before treatment with muck, was much more fertile. After resting one year the bogs were sufficiently rotted to knock to pieces easily, and the piece was again plowed, and planted to potatoes, the Mercer variety. The neighbors thought it foolish to think of raising potatoes in that dry sand; but the yield in the fall, though less than on moist, manured ground, surprised them. A fair crop of oats followed, and this spring we have planted the same piece to corn.

I am confident that peat alone, after a year's exposure to the weather, will increase the crops of light land two or three fold, if bountifully applied. J. A. A.

Springfield, May, 1859.

FRANKLIN COUNTY AGRICULTURAL SOCIETY.

The report of this Society for the year 1858, is an interesting document, and is prepared with the usual ability of Mr. GRENNELL, the accomplished Secretary. The thousand head of stock on the grounds must have made a magnificent show. There are no finer cattle to be found in the State, if in the country, than the Short-horns and grades of the hill and river towns in Franklin. The hills afford sweet, rich grass for the summer, and the intervales abundant crops of good hay for the winter. We have seen some samples of their four year olds, weighing 4000 pounds per yoke. They are splendid animals, and the cows look as though this county should be the very focus of good butter.

There are some very fine flocks of sheep in the county. Mr. FIELD's South Downs and Cotswolds are hard to beat, and together with his ox weighing 3,300 pounds, shows that he knows how to make good stock.

The show in the other departments was highly creditable to the society.

The address, by Dr. LORING, was both able and interesting, and the services in the hall entertaining and instructive—and with the presence of such men as Mr. GRENNELL, Mr. FAY, of the Massachusetts society, Dr. LORING, Mr. DAVIS, of Plymouth, and Gen. WHITNEY, they could not be otherwise.

This comparatively young society is in the hands of practical, energetic men, and is doing much to develop the agricultural capacities of that portion of the valley of the Connecticut.

For the New England Farmer.

ON WORKING OXEN.

Read before the Concord, Mass., Farmers' Club,

BY CHARLES A. HUBBARD.

Till oxen are four years old, they are usually called steers, afterwards oxen. The signs of a good ox for work, according to my experience and observation, are these; long head, broad and level between the eye, and the eye full, keen, and pleasant. Such marks indicate ability to receive instructions, and a willingness to obey. An ox with very large horns near the head, is apt to be lazy, and he will not endure heat well; forward legs straight, toes straight forward, hoofs broad, not peaked, and the distance short between the ankle and the knee; these properties enable an ox to travel on pavements and hard roads. If the ox toes out, the strain comes on the inside claw, and when travelling on hard ground, he will be lame at the joint between the hoofs and the hair; when the toes turn out, the knees bend in, and an ox with crooked knees is apt to become lame by holding heavy loads down hill; full breast, straight on the back, round ribs, projecting out as wide as the hip bones; these are signs of strength and a good constitution. The best colors are brown, dark red and brindle. When an ox has completed his eighth or ninth year, he should be fattened.

TRAINING OXEN.

A word on training oxen. I have found that by far the best time to train steers is when they are calves, say the first winter. Oxen that are trained when quite young, are much more pliable and obedient, and this adds much to their value. Steers that run until they are three or four years old, are dangerous animals to encounter. They are always running away with the cart or sled whenever there is a chance for them, and often serious injury is the result. I would not recommend working steers hard, while young, as it prevents their growth; there is a difference between working them and merely training them. I have observed that very little attention is paid by our farmers to train their steers to back, but as they become able to draw a considerable load forward, they are often unmercifully beaten on the head and face, because they will not back a cart or sled with as large a load as they can draw forward, forgetting that much pains has been taken to teach them to draw forward, but none to teach them to push backward. To remedy the occasion of this thumping, as soon as I have taught my steers to be handy, as it is called, and to draw forward, I place them on a cart where the land is a little descending; in this situation they will soon learn to back it. Then I place them

on level land, and exercise them there. Then I teach them to back a cart up land that is a little rising, the cart having no load in, as yet. When I have taught them to stand up to the tongue as they ought, and back an empty cart, I next either put a small load in the cart, or take them to where the land rises faster, which answers the same purpose; thus in a few days they can be taught to back well, and know how to do it, which, by a little use afterward, they will never forget. This may appear of little consequence to some, but when it is remembered how frequently we want to back a load, when we are at work with our cattle, and how convenient it is to have our cattle back well, why should we not teach them for the time when we want them thus to lay out their strength? Besides, it often saves blows and vexations, which is considerable when one is in a hurry. I never consider a pair of oxen well broke until they will back with ease any reasonable load, and I would give a very considerable sum more for a yoke of oxen thus tutored than for a yoke not thus trained.

MANAGING AND FEEDING WORKING OXEN.

The following is from the *Yankee Farmer*. Oxen working on a stone-drag, on the foot of a plow, on the sled-tongue, cart spire, or twitching stones or timber, should carry their heads well up, as this will enable them to do this work much easier; those that work as leaders, forward of other oxen, should carry their heads low, and have the yoke the right length, let the bows suit the neck; the yoke and bows to the leaders should set a little snugger than to the nib oxen. Never use the whip but from necessity. When about to strike the young steer or ox, ask yourself, "Will he know what I strike him for?" Let each ox have a name, and be sure he knows his name. Never speak a word to an ox without meaning; have a particular word to start your team by, that all may pull together. Never hurry your oxen while riding behind them, lest they learn to haul apart. Oxen should be shod with a broad shoe, to travel on hard roads; the shoe on the fore foot, should set back at the heel, nearly half an inch further than the hoof bears upon it. Oxen are frequently lame by reason of short shoes. The best feed for oxen at hard work, is to give to each two quarts of meal, wet, mixed with good chopped hay, three times a day, and as much hay as he will eat; this is the highest feed working oxen ought to have, and on this they will work every day.

SIZE OF WORKING OXEN.

A word as to the particular size of working oxen. A yoke of oxen weighing twenty-eight hundred pounds, I consider heavy enough for all practical purposes. It depends something on what a person wants to use them for, but for travelling on the road, or for most any part of farm labor, cattle of this size are heavy enough. There is a prevailing opinion among farmers who use oxen, that they must have a very large, heavy pair, in order to get along well; but as a general thing, large, heavy cattle are very apt to be slow of motion, and much more liable to be lame, besides more expensive in keeping. Two or three years ago, I had a heavy job of work on hand, and thought I must have a heavy yoke of oxen to do it. I accordingly purchased a large pair of Durham cattle which weighed thirty-six hundred pounds, paid a great price for them, and put them at work, and a more miserable yoke of oxen I never owned. If they did a day's work, it took them three to get over it. I then purchased a pair of medium size, which weighed about twenty-six hundred pounds; they proved well, went through the job in good shape, and were ready for another.

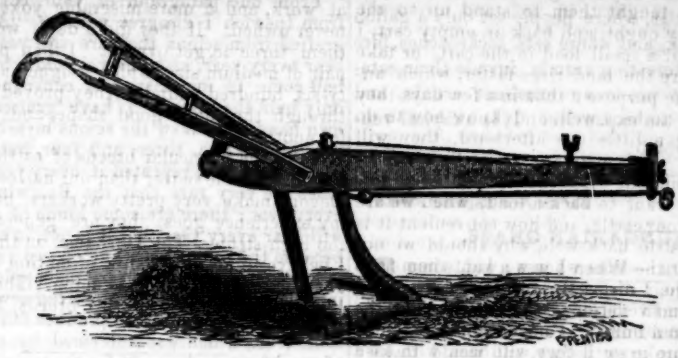
As to the particular breeds of cattle for work, I know of none better than our native race. The Devons make very pretty workers, but as far as my experience goes, they are generally a little too high-strung. The Durhams, on the contrary, I believe to be rather slow of motion as a general thing, and want high keeping. The Ayrshire, Hereford, and various other breeds, I am not at all conversant with.

MASSACHUSETTS SOCIETY.

The attention of the reader is called to an article in another column, by Judge FRENCH, upon the "*Massachusetts Society for Promoting Agriculture*," in which he glances at the operations and influences of the society, since its foundation. The Judge has our thanks for this timely and just notice of a society whose life has been crowded with good deeds. We have personal acquaintance with very few of its members, and speak of it entirely from what we know of its works. Its published Transactions we have read from their commencement, with care, and have been instructed by them, and whenever the society has been assailed, have said whatever we could to make its past action and its objects better understood. We hope it will keep on its accustomed course, form "no entangling alliance" with other associations, and continue to promote the interests of agriculture in the future as much as it has promoted them in the past.

FARM DRAINAGE.—The above work, a handsome volume of 400 pages, will be sent *post-paid*, to any subscriber to the *N. E. Farmer* who will send $1,00 to this office by mail or otherwise. The author is Judge FRENCH, our well-known Associate, and the book gives practical directions for draining land with stones, wood and tiles, in the cheapest and best manner, with 100 engravings of implements, &c. It should be read by every farmer who has an acre of land to drain.

PROFITABLE SHEEP.—I will give you a statement of a little flock of sheep that I have raised in two years. I bought three ewes, two years ago this spring—two of them had four ewe lambs; and last year six of them had eight ewe lambs, making in all fifteen ewes; they have never had a buck lamb. I consider it a pretty good increase. I had $14 for the first purchase, and the wool has about paid for keep, and I have just sold the flock for $75.—*Country Gentleman.*



For the New England Farmer.

THE LITTLE SUBSOILER.

BY JUDGE FRENCH.

When we plant early, and heavy rains follow, the earth packs down so hard between our rows of corn, potatoes and roots, that we frequently repent of our haste in putting in the seed, and declare that we will never be guilty of such folly again.

My friend, Professor Hoyt, now Chancellor of Washington University, at St. Louis, once employed a man to fork up the earth between his potato hills. His land was sandy, and had set like the sea beach, as hard as a very soft grindstone. The professor said he knew the potatoes could not breathe in so tight a place as that. Often we see gardeners loosen the earth round their plants with a spade or trowel, after a hard storm, and every man of common sense knows that in general, the more freely plants are supplied with air, heat and moisture in the natural soil, the better they thrive.

Now we have an implement (figured above) that supplies the want thus indicated, in the shape of a small subsoil plow drawn by a single horse or mule. The use of a subsoil plow is to break up and loosen the subsoil, without bringing it to the surface. I have used the little subsoiler with great satisfaction; the present season my corn was planted May 25th, on land drained with tiles, part of it heavy clay; it came up well, although the season was wet. As soon as the rows could be well traced, on the 13th June, the little subsoiler was put through twice in a row, about ten inches deep, which raised up the soil as light as if just plowed. Then came the rain and as every body knows, it has kept raining ever since, but down goes the water to the depth of this cut, instanter, and the drains are doing their best below, and the water is out of sight, though the three-inch drains often run full.

On the 19th we finished hoeing it, and my man James, and I, think we saved the cost of the little plow on this one and one-third acres of corn. On our mangolds, three-fourths of an acre, we have also used it, running between the drills as soon as the rows are visible, and we are ready to recommend it without hesitation for general use in corn, potatoes, mangolds, turnips, carrots, and the like.

Prof. Mapes, I think, is entitled to the credit of introducing the use of the subsoiler in this way, and the pattern of the best subsoil plows in use was furnished by him, and he calls it a *soil-lifter*. Send to Nourse, Mason & Co. for subsoil plow No. 0. It is of steel, and well made, and the price $8. After the little subsoiler has gone through, use the best kind of cultivator. Reader, do you know what *is* the best kind?

James says that "at home," that is, in Ireland, they use a small plow with the mould-board removed, running between the potato drills, to loosen the soil before turning the earth up to the potatoes with the common plow, and he joyfully recognizes in the use of this little implement the process there so familiar.

Exeter, N. H., June 22, 1859.

PRATT'S PATENT SELF-VENTILATING COVERED MILK-PAN.—One of these pans was left with us a week or two since, and was at once transferred to the dominions of the women, where it was put to a practical test, and pronounced a good article, but not one adapted to the dairy-woman's use. It is not broad enough as milk

should be set shallow, in broad bottomed pans. It would require too much time to adjust the cover. It is too expensive. But for use in large towns and cities, where people set only a gallon or two of milk, and where rats, cockroaches, flies and other interesting vermin invade their eatables, it must prove an excellent article, and would not be too expensive. It is a capital ventilator and cooler.

For the New England Farmer.

HUNGARIAN GRASS.

Mr. Editor:—When I was a lad, some fifty-five years ago, I distinctly recollect of hearing an old gentleman declare, (sportively,) that, the farmer who would make two spears of grass grow where only one grew before, and would make a yearling steer weigh as much as an ox, was entitled to much credit, and would most assuredly get a feather in his cap.

When I read the communication in the last *Farmer* from Mr. Richard, of Richmond, relating to his Hungarian grass, I was led to feel that he, too, was entitled to much credit, for he most positively declares that he prepared his ground, and between the fifteenth and twentieth days of June, '58, sowed thereon twenty-nine quarts of Hungarian grass seed; the product of which, he informs us, was seven and one-half tons of hay secured, and, moreover, from the hay he threshed out eighty-five bushels of well-ripened Hungarian grass seed!

If Mr. Richard, (in some future number of the *Farmer,)* will be so obliging as to give the actual measurement of the land from which he took so large and valuable a crop of grass and seed, the character of the soil, and the manner in which he prepared the ground for the seed, whether by top-dressing or otherwise, he will confer a favor upon every farmer who takes delight in seeing fat cattle upon a thousand hills, and all those who are most willing to learn the science whereby two spears of grass may be made to grow, (throughout the farm) where only one grew before. A. Browne.

Dalton, Mass., June 13, 1859.

For the New England Farmer.

APPLES AND APPLE TREES.

In your paper of June 11, your correspondent, "S. P. Baker," says that apple seeds planted where they are to stand permanently, will be worth twice as much, and will live as long again, bear twice as many apples, &c. I consider his remarks partly true, but not wholly so. In my own mind, an orchard will do better to have the seed planted where they are to stand, as then the tap-root goes directly down, and on dry land the tree will stand the drought better, and will, I think, live longer; but to say they will live twice as long, and bear twice as much fruit, is, I think, a mistake. My opinion from long experience is, that the flavor of fruit is affected by the soil, and very little generally by the tree. Putting the Baldwin on a warm, dry soil, the flavor is richer and more melting. It ripens earlier, but will not keep so long. On low land it does not ripen so early and the pulp is more firm, and the flavor not so pleasant to the taste.

From one paragraph of your correspondent from Ipswich I disagree wholly. "Apple trees grafted from scions that are two years old will bear every year, as a one year old scion has only half come to maturity, and consequently bears only half the time." I have grafted with my own hand and taken the scions myself from one year old, to two, three, and four, but more generally from two, repeated it every year, and the cases are very rare that the Baldwin will bear every year; there are some kinds of apples that will bear every year, but it is not, in my opinion, because the scions were one or two years old.

In consequence of a very fine apple that originated in Sherborn, where I lived seventy years, running out or failing to produce fair and handsome fruit, which was esteemed by every lover of good fruit, and was fit for the table from October to April, my father before me had grafted probably a hundred trees of that kind, and up to 1810 produced as handsome and fine fruit as I have ever seen. Since that year it has not been worth raising. That settles the question that some apples have and will run out. I tried every way I could think of to restore them by pruning and cultivation, but they grew worse by it. Some writers have supposed that the flavor of fruit is influenced by the stocks on which they are grafted, but I have thought more by the soil.

Daniel Leland.

East Holliston, June 13, 1859.

For the New England Farmer.

ONION AND TURNIP CROPS.

Mr. Editor:—Mr. Proctor does not believe there is any remedy for the onion maggot. Has he tried the guano and did it fail him? If he will fix a little bed in his garden, and sprinkle the plants with guano when about three inches high, and again when they are setting for bottoms, and the maggot meddles with them, they will do different with him than they have done with me. I have now a little bed in my garden of about ten square yards of as handsome onions as I have ever seen at this time in the year. They have had two coats of ashes and one of guano.

I see I am not alone on the turnip crop. My experience has been the same as your correspondents, "C." and "J. L. T." I never had a good crop of anything after a crop of turnips till I had manured the ground. Ed. Emerson.

Hollis, June 11, 1859.

The Slaughter which Sustains us.—When we ride we sit upon the skin of the pig; when we walk, we treak upon tho skin of the bullock; we wear the skin of the kid upon our hands, and the fleece of the sheep upon our backs. More than half the world are human beings in sheep's clothing. We eat the flesh of some creatures, of some we drink the milk; upon others we are dependent for the cultivation of the soil; and if it is a pain for us to suffer hunger and cold, we should scrupulously avoid inflicting wanton misery upon the animals by which we are warmed and fed.

For the New England Farmer.

SHEEP SHEARING.

MR. EDITOR:—In your last number I noticed a remark on sheep shearing, where it says, "when the oil has been secreted after washing." In washing sheep in cold water the "yolk" or oil, cannot be started, it is only the filth and dirt, that can be washed away, and as soon as the sheep are dry they are fit to be shorn; two fine days is amply sufficient after washing, getting them under cover for the first part of the day for shearing.

Putting up wool for market is just the same as any other commodity. If wool is not washed well, either for the sake of gain, or through negligence, it will certainly diminish the price, or its real value, and make room for fault-finding.

PUTTING UP THE FLEECE.

In my practice of upwards of forty years, I find a great deal of wool bungled up, in the fleece, which much deteriorates its value. After the fleece is off, bring the wool outside up, then shuck it up as near its natural size as possible; then double the sides over (not roll) till about a foot wide, then turn the rump half way, and bring the head part to meet it.

Roll the fleece half way over, and then the other half. Have two strings, each two yards long. Use one around, and the other end-wise, bringing it up tight, and in good shape. As manufacturers of wool are scattered all over the New England States, sell your wool to them, and you will be more likely to get its real value, as many speculators don't have the practical knowledge in purchasing. JAMES TOWNSEND.

Marlboro', N. H., June, 1859.

ALLIGATORS.

You have heard of these interesting reptiles, in books, and perhaps seen a stuffed specimen in some cabinet of curiosities. You can behold here, on both sides of the road, *ni situ*. They are just beginning to show themselves in considerable numbers. In summer they swarm by thousands. They lie on top of the logs sunning themselves, very much like mud turtles. There is one middling sized animal, perfectly sun-dried, and brown as the log he rests on, his mouth gently opened, with a most benevolent smile. His air is so meek and languishing, that he would not apparently hurt one of the thousand flies around him. They walk in, delighted with the apartment. Snap! those amiable jaws are only an ingenious fly-trap, enticing myriads of hapless beings to their undoing. But catching flies is only the pastime of the alligator. His tail is a handy bludgeon, with which he knocks over larger game. He is fond of pig, both "long" and "short," and if any of the stray shoats do not return at nightfall, the owner never thinks it worth while to look for him the next day. They seldom attack men, that kind of game not being particularly abundant in these parts.—*Letter from Louisiana in Hartford Homestead.*

A CERTAIN CURE FOR BOTTS IN HORSES.—When you find your horse complaining, and looking around at his side, and lies down pretty often, and is not swollen, you may very readily come to the conclusion that he has the botts. Lose no time in giving him a quart of sweet milk and molasses, and just as soon as you let his head down, after he swallows the drench, slap him several times on the side of which he complains most, with a paddle about two feet long, six inches wide and one inch thick, striking him pretty hard; this process jars the botts loose from him, and they take hold of, and feed on the milk and molasses. In ten or fifteen minutes after striking him with the paddle, give him a quart or half gallon drench of strong sage tea; this accomplishes the object by killing the botts, and the horse is relieved.—*Livery Keeper in Ky. Farmer.*

For the New England Farmer.

RAIN AT THE WEST.

This is a fine country for farming in many respects, and though once in ten years a little too dry in summer, is also, some years, rather wet. The year 1857, to the first of August, was dry, and up to April 8th, 1858, was so beautiful that farmers could plow every month. The great rains began at that date, and abated June 10th, 30 inches having fallen. To this date wheat looked fine, and two weeks' good weather seemed likely to insure a good crop. But excessive heat and rain, showers and storms, like eastern dog-days, soon ruined the wheat by black blight, and farmers' hopes also. Great showers in July and August. From October 23d to December 6th almost incessant wet—at one time the sun was not seen for nine days. From April 8, 1858, to the same date, 1859, 84 inches of rain fell; of course the ground was wet, there being six inches in March.. April had 11 storms, and twice when snowing there was thunder; in fact, electricity seems to abound, whether cold or warm—though there has been very little warm weather yet. There has been a great amount of thunder and lightning, sometimes of the most vivid and terrific character, for six or eight hours in almost constant succession. In view of all these things, and the fact that the soil is soaked, and that the sun shines but little, as my record will show you, what may be expected for crops this season? In this section we may be doomed to drowning, while at the East you are burning.

Last year, in eight months from the 8th of April, we had 72 inches of rain—nine inches per month; and this year bids fair to be about equal to it, as the month of May is very wet.

It is altogether premature to form an opinion of the wheat crop in the whole West; but one thing is certain, as Iowa sows but a little winter grain, and as that of spring is a small sowing, and as what there is stands thin, and is backward, this State will have little if any surplus this year. Considerable corn is planted, and some of it needs weeding, as New Englanders say, but the ground is so drenched with rain that it cannot be done.

In March last we had eight fair days, five part fair, four hazy and fourteen cloudy—rain six and one-fourth inches.

In April, eight fair days, five part fair, seventeen cloudy, eleven stormy—rain three inches.

In May, ten fair days, six about half fair, fif-

teen cloudy, fifteen days rain—amount six and one-half inches. I could give you the direction of the wind every day for three months, but the range of the thermometer would be more than you wish to print, or your readers to peruse; though worth more than it costs to me. Though not a subscriber, I read your valuable paper, and appreciate it highly though not all adapted to this region.

June 1st, another smart shower.

With such an amount of rain and cloudy weather on your sandy soil in Massachusetts, you might cultivate the ground quite well; but here, on the rolling or flat prairies, with a fine adhesive soil, more or less clayey, and all limey, resting on a clay subsoil, it is altogether different, and allowance must be made to farmers, if in such excessively wet seasons we cannot pay all our debts. IVERS TAYLOR,

A Bay State Man.

Denmark, Lee Co., Iowa, June 1, 1859.

EXTRACTS AND REPLIES.

A GOOD CALF.

I am now raising a heifer calf that is considered by myself and neighbors a very good one. It is ten months old to-day. When eight months and a half old, it weighed 700 lbs. Think it would now weigh 800. It is five feet and two inches in girth, and is, according to its length and weight, proportionally small where measured for the girth. It is of the no-horned breed, and of a bright Devon color. Until within a few days it has had the milk of one cow, and has been fed some besides. Yours, &c., B. F. FLETCHER.

Derby, Vt., May 25, 1859.

REMARKS.—We suppose the writer means by "no-horn breed," what are termed "Polled cattle," by graziers. Ayrshire and Dumfries, in Scotland, with two or three other places, once formed the ancient province of Galloway, and the polled, or no-horned cattle, were natives of that province. By "Devon color," he means the dark mahogany color which always distinguishes the true Devon.

WHITE SPECKS IN BUTTER.

I would say in answer to "T.," of Felchville, Vt., that white specks in butter are caused by getting sour milk in with the cream when skimming, which becomes hard like cheese; to prevent white specks in butter, stir the cream thoroughly after skimming, and should there be specks then, rinse in cold water.

Ludlow, Vt., 1859. MRS. L. E. H.

OIL SOAP FOR BORERS.

MR. EDITOR:—I saw in one of your papers within the last six months—I do not now remember the date of it— a communication in which the writer stated that he had, for several years, used oil of soap to prevent the depredations of borers in apple trees. I would like to know if it is the oil of soap such as is used by fullers in scouring; and, if so, what is the time of applying it? What quantity is used, and in what manner is it applied? If you, or some of your subscribers, will give me the desired information through your columns, it will greatly oblige

SAMUEL PARKS.

Rock Bottom, Mass., June 4, 1859.

REMARKS.—Perhaps the person who recommended it may give Mr. P. some information—we have never used oil soap for that purpose. We suppose it is the common whale oil soap.

KICKING COWS.

Place the animal by the side of a stall or partition, and confine her head with a rope, so she will not be able to step back, and then put a bar the other side, having a place beside her head to put one end of the bar in, and fetch the other end of the bar down as low as you can conveniently; milk under the bar, and make it so tight that she cannot change her position. If she should kick she can do no hurt, and she will soon relinquish her old trick. I have tried it with good success. E. E. ROBINSON.

Sunderland, Mass., 1859.

I have just lost a valuable South Down buck, and on examination, found worms in his head, which probably caused his death. Can you, or any of your correspondents, tell me the cause and cure? Where can I obtain another pure blood South Down buck? N. P. RINES.

Concord, N. H., June 6, 1859.

REMARKS.—Worms in the head of sheep are caused by the "gad-fly." Read "Morrell's American Shepherd."

TO PREVENT A COW FROM KICKING.

Having noticed in the *Farmer* of this month a plan suggested by "J. Y. N." for the purpose of curing kicking cows, allow me to suggest one which is, perhaps, equally as good. Take a rope long enough to go round the cow, commencing at her forward legs, and tie it over her shoulders. Now take a stick, and twist the rope tolerably tight, which will prevent her from using her hind legs; she cannot stir them an inch.

Boston, June, 1859. A BELMONT FARMER.

SCARE CROWS.

This is the time of year for our corn-fields to exhibit all sorts of artistic ingenuity, in the shape of old clothes statuary, and a very odd and expressive tableaux, as well as a great extent of never-ending twine—glittering pieces of tin hung on poles, by ever twisting and twisting strings—old coffee pots, and dilapidated hats; all to intimidate that very sablé, but sagacious bird, the crow. Mr. Crow generally laughs in his sleeve at all this expenditure of cast-off toggery, and takes what corn he wants before the farmer is up, or in the house at his meals, or gone to meeting, or absent from the premises from any other cause. The best mode that we ever adopted, to keep this inveterate old preacher from pulling up our corn, was to surround him with assailants of his own kind. Make bird fight bird. We once set up a couple of martin-boxes on poles in our corn-field. These were occupied by families of

martins; and woe fell upon every crow's poor devoted head that dared to show itself anywhere near the premises. They were out as early as Mr. Crow himself, and ready to give battle all summer, or, until their young had flown, and they got ready to migrate South. There was many a battle fought over the field, but no corn was pulled up that year.—*Maine Farmer.*

"NEVER PUT OFF TILL TO-MORROW."

Now is the time to be busy,
Now is the season for toil:
Work while 'tis Spring, and the Autumn
Will bring you the fruits of the soil.
There's no time for work like the present,
Let idlers not lead you astray;
For "never put off till to-morrow
The thing you can do to-day!"

Be up with the dawn of the morning,
In time to your labor repair;
And though you do ever so little,
Be sure that you do it with care.
And should the world tell you to linger,
And join for a moment in play,
Mind, "never put off till to-morrow
The thing you can do to-day!"

So youth is the time for progressing
In wisdom's delightful road,
That age, at the end of the journey,
May find a repose with God.
Then remember, while youth is in splendor
(Not when you're old and grey,)
To "never put off till to-morrow
The good you can do to-day!"

For the New England Farmer.

GRAND DIVISIONS IN THE ANIMAL KINGDOM.

It seems to me that the greatest impediment to the diffusion of knowledge, by the press, or by scientific lecture, is to be found in the persistent rejection, by the farmer, of scientific terms. "But," I am frequently asked, "why not use common terms?" I answer, because in some cases we have no common or familiar term to express the idea, but more frequently we use the scientific, rather than the common term, because the common term is indefinite, and the scientific term is precise, in its meaning. If the lecturer use the common term to express his definite scientific idea, his different hearers will interpret it differently. I meet with men every day who use indifferently the words, species, order, class, genus, tribe and family, to express the same idea. These things ought not so to be. It seems to me a truism, that without precision of language, no definite idea can be conveyed. Is it not, then, the farmer's first duty to acquaint himself with the language of science? I do not propose to write a lexicon, but to give the proper idea to be attached to a few terms found in each of the departments of science in which the farmer must be interested. I shall dilute the article some, to keep it from being dry, but wish it understood that each scientific term, however frequently used, has but one meaning—the same in every place.

I commence with the animal kingdom. All animals have been formed by the Creator, on four great plans, as distinct as the Gothic, Ionic, Doric and Corinthian orders of architecture; consequently, naturalists say, that there are four grand divisions in the animal kingdom. In the order of their rank, commencing with the lowest, they are the Radiates, Mollusks, Articulates and Vertebrates. The Radiates are so called becaus their organs, especially their nervous systems, are arranged around and diverge from a centre, like the spokes of a wheel. The star fish, (Asterias,) is the type of this style of animals. But in every division, the general plan is greatly modified, producing classes, orders, genera and species, and giving that beauty and variety in which the Creator seems everywhere to delight. This division mostly inhabits the sea, and is of little economical importance to the farmer.

The second division is that of shell fish. They are called Mollusks—the word signifying soft. Most Mollusks, though soft animals, are covered with a hard shell, as in the case of the clam, oyster and snail, and are said to be testacious.—Squids and slugs have no visible shell, only a rudimentary one under the cuticle. Slugs are often found under old logs and stones, and are thought to be snails, which have crept away from shells—a natural but a false notion.

The third division is said to be Articulate, because the animals, for the most part, have an external skeleton composed of rings articulated or joined together, as in the lobster and the wasp. The earth worm and the leech have no hard skeleton, but their rings are visible, and their style of organism of the articulate type, their nerves being distributed in two lines along the lower part of the body, with ganglia or modular masses at each ring. Insects, caterpillars and spiders belong to this division. The farmer's hopes and his fears, his success and his failures, are frequently intimately connected with these animals.

The fourth division is that of Vertebrates—animals with a spine or back bone. The plan of this division reverses that of the last. The skeleton of this is on the inside and the muscles on the outside. The nervous system is on the upper side of the body, and contained in the back bone. The jaws work vertically—those of the articulate work horizontally. In this division are included fishes, snakes, turtles, lizards, alligators, monkeys and men. MORE ANON.

Wilbraham, 1859.

REMARKS.—Excellent. You point out a path in which thousands of our readers ought to tread, and take observations.

For the New England Farmer.

BOTS IN HORSES.

MR. BROWN:—I noticed in a recent number of the *Farmer* an account of the sick colt, written by "O. T. Willard." He called the disease bots, which I thought was impossible, although his description answered to a case recently before me. But my colt was so far gone when friend Willard intimated that it was bots, that it seemed useless to doctor for them. I had been told if my colt died and I examined him, I should not detect the cause, for all horses have some bots. My colt died this week. I got my brother, and into the examination we went, expecting to find the truoble in the spinal column. But if it was

there, its traces were so delicate that we could not detect it.

In the region of the heart and lungs there appeared serious trouble; they were very dark colored; the lungs swollen to a monstrous size; as we had got our hand in, we thought we would look in to the stomach or maw, and entrails. On opening the stomach it seemed literally coated with bots. We commenced counting, scraping off, or cutting them from the maw, until we counted in round numbers, five hundred bots, as large as a bee; his maw was literally eaten out of him.

I have been thus particular in this case, hoping to draw some instruction from you or some of your correspondents. Have given this colt the past three months, while unable to stand, some laudanum, brandy and molasses, and a great quantity of new milk. I had supposed the bots to be a quick disease. Was it the milk and molasses that made him linger thus long?

Some one that knows, I wish would inform me how many bots, or how many hundreds of them, a healthy, full grown horse usually has in the maw? Was the number in my colt a common or an uncommon number? I think it uncommon. Friend Willard advised me to doctor for the bots, but I want a prescription for killing those five hundred bots, without injury to the colt.

WHARTON D. SEAR.

Southampton, June, 1859.

HOEING.

One of the most important items of business on the farm is hoeing. So much depends upon this particular process of crop-getting, that a farmer may cover broad acres of fertile land with manure and seed, work it in the most approved and careful manner, keep off all beasts and insects, and then, neglecting to hoe timely and properly, fail to receive anything like a remunerative crop. It is one of the weakest pieces of folly in which the farmer indulges, and is the next-door neighbor to cultivating and raising a fine crop with assiduous labor and pains, and then neglecting to harvest it. Another look at it, shows that the folly is even greater than this. Why?

A neglect in hoeing allows weeds to grow and perfect their seeds. These are annually shed upon his own ground, stocking it for years to come, and these annual sowings are so many annual accessions of new crops of rank weeds, to torment and exhaust the energies of the cultivator, in his attempts to make them give place to the plants which he wishes to rear. But this is not all the wrong he does.

Nature is always at work to hide her blemishes (as we look upon them) with something grateful and beautiful to our eyes—some drooping bell-shaped flower with large green leaves covers the otherwise bald roadside, where excavations have been made, or patches of fresh grass, or rushes, or sedge, or shrubs, cover the earth laid bare by accident or by man. In order to accomplish this, she has given many seeds locomotive power, and they fly or float away, perhaps long distances, in vast numbers, to settle a new colony wherever they may alight.

Is it right, then, for one farmer to raise a crop of pernicious plants and perfect their seeds, that they may invade the premises of another, and cause him years of painful labor from which he derives no profit? It certainly is not right, and the good husbandman will consider well what his duty is in relation to this matter.

Hoeing has other advantages beside that of keeping the weeds down. It has something the effect of thorough draining. Well drained land becomes light and porous, is prepared to receive the air and warmth of the sun's rays, and the fertilizing properties contained in rain water and in the dews. Lands well hoed are placed in a condition much like this, and will produce a much larger crop than lands left unhoed. Neglected hoeing brings—

1. An unsightly, slovenly field, which is a shame to its possessor.

2. A hard, unyielding soil, that makes what hoeing *is* done doubly expensive.

3. Tons of weeds to rob the soil and deprive the crop of its natural source of support.

4. Crops of seeds that perpetuate the evil, and an infliction of wrongs upon others that we have no right to inflict.

5. Loss of reputation as a good farmer and an upright man.

6. Loss of labor, loss of crop, and what is more than all, loss of that heavenly feeling of *duty done*, that approbation spoken by every well-tended tree and plant and flower, "Well done, good and faithful servant, thou shalt have thy reward."

Better neglect *haying* than hoeing—better neglect *planting*, even, than hoeing! But it is too hot to say any more about it now. It is cooler and more pleasant to *hoe* on such a day as this sixteenth day of June, than to sit at the desk and write about it.

SALT AND ASHES FOR COWS.—On turning my cows to pasture, in the spring, I provide several small tubs, and having fixed them firmly in the soil to prevent them being overturned, put into each tub one quart of salt and three quarts of sifted wood-ashes, previously well mixed by stirring. The cows partake freely of this mixture. It prevents injury from the sudden change from dry to green food, and has, besides, a most invigorating effect upon the general system. Some assert that salt should be given only as often as once a week, as its more frequent use would be injurious. But when supplied in this way, no apprehension need be entertained.

For the New England Farmer.

A SIMPLE PLOWMAN.

MR. EDITOR:—I noticed in a late number of the *N. E. Farmer* a diagram and description of a "New Plowman," to take the place of one of the sons of the Emerald Isle, which I have no doubt will do the work full as well as he. But it is a privilege which the Yankee farmer highly prizes to purchase that which is simple and cheap, rather than that which is more complicated and expensive, provided it will do as good, or better work. Hence, I propose to give you a description of an implement designed for the same purpose, which the farmers in this vicinity have been using for some years past. It is manufactured, and I suppose was invented, by H. STRICKLAND, Esq., a plow manufacturer, at Bradford, Vt.

It is simply a wheel, fixed to a cast-iron bow, similar in shape to those commonly used for holding plow-wheels, which is fastened to the land-side of the plow by bolts. There is a mortice through one end of the bow, so that the wheel can be raised or lowered at pleasure. On land that is comfortably even and free from stones this wheel will hold the plow more even and steady than most men.

In order that a machine of this kind should work perfectly, it is necessary that the surface of the ground where the wheel and plow runs should correspond; for if the wheel drops into a hollow, it will run the plow off; or if it rises over a knoll, it will run it to land. Hence, I should think this wheel would work better than the Plowman, inasmuch as the ground would be more likely to correspond at a distance of only three or four inches from the furrow than it would as many feet from it. The description of the Plowman does not give the length of the triangle, but by the diagram it appears to be as long as the distance from the colter to the end of the beam, which must be nearly three feet, which I should think would not only render it useless, but somewhat troublesome, when the land was nearly finished, and when plowing back furrows near a fence. S.

Fairlee, Vt., June 7, 1859.

For the New England Farmer.

STATE BOUNTY.

MR. EDITOR:—In the tabular statement of premiums awarded from the funds given by the State for the encouragement of agriculture, it appears that nearly half the whole amount is paid and distributed in the towns in which the shows are holden. This will do in those counties where there is a rotary plan of exhibitions, but in those where the exhibitions year after year are stationary in the same place, it seems to be a limited and partial use of the bounty of the State. Without doubt, the purpose in giving it is, that the benefit shall be generally diffused through the whole community; and not that a few individuals, who regulate the shows, should so manage the same, as to pocket near all the bounties.

Would not this difficulty be in a measure corrected by awarding more for farm management, or experiments in culture, instead of animals exhibited? or might it not be done by having committees to examine such claims, as may be entered in every section of the district, within the limits of the Society? These hints are thrown out, if possible, to bring forth a more equitable and less exceptionable distribution of this bounty, which is admitted to be quite liberal. P.

June 10, 1859.

REMARKS.—Glad attention is called to the subject. We do not think, however, that the premiums are awarded in the town where the show is held, by any management of "those who regulate the Shows," but because, it being convenient, so many more persons contend for the premiums when the show is to be in their own town. We believe the records of every society in the State will show that a considerable portion of all the premiums are awarded to the people of the town where the exhibition takes place, or to persons from towns in its immediate neighborhood.

For the New England Farmer.

THE WEATHER OF THE SPRING MONTHS, 1859.

March came in rather roughly, with disagreeable winds and low sunrise temperatures, but after the first few days the weather was uniformly mild, and the whole month much resembled what April usually is. The frost left the ground very early; the snow disappeared on the plains during the first ten days, and from the mountains before the close of the month, and by the 20th, the roads were quite dry. The ponds were early cleared of ice, and on the 22d, the frogs croaked merrily. Many of the early spring birds came in the fore part of the month, the blue birds arriving on the 6th, and large flocks of wild geese passed over on the 10th and 11th, and other flocks followed on the 15th and 25th. The thermometer frequently indicated 50° in the shade, and there was every indication of a very forward season. The last week of the month was very fine, though there was remarkably strong north-west wind during the last twenty-four hours.

But the most remarkable feature of the month was the large number of heavy rain storms, and consequent heavy floods. The highest water in the Connecticut was on Sunday, the 20th, when the river at Springfield was twenty and one-half feet above low water mark, and at Hartford twenty-six feet above, while the water was *thirteen* feet deep on the Holyoke dam. Many of the bridges over the Connecticut and its tributaries were carried away, and a large amount of other serious damage done, the flood ranking in hight as the *fourth* of the century, falling but two inches below that of 1845, a foot below that of 1801, and two feet one inch below the *great flood* of 1854, the highest ever known on the Connecticut.

April followed, with the first week cold and rough, there being out of the first nine days *eight* of strong north-west wind. About the middle of the month, there were several cold rain storms; while it rained here, snow falling on the mountains and at the north; but generally the weather was very even, and marked by no severe extremes. The latter part of the month was uniformly mild, and generally fine; and at the close

of the month, vegetation was considerably advanced, rye being several inches high, mowing lands and pastures green, and the buds on the trees just bursting into leaves, even then some poplars and birches being quite green. During the last few days, swallows, brown thrushes, chewicks, whippoorwills, and a host of warblers and fly-catchers, made their appearance.

May, though warm and generally favorable for vegetation, and consequently for the farmer, was divided into about three distinctly marked sections of fair weather and rainy weather. The first eight days were remarkably clear, and exceedingly warm for the season, thermometers ranging from 84° to 94° in the shade. The weather about this time for nearly two weeks was very dry; fires raged in the woods in various quarters, and a dense smoky haze threw a disagreeable aspect over the landscape, hemming in the view to a few miles in extent, and veiling everything distant in a forbidding indistinctness. On the 9th, after great heat in the forenoon, a great change in the weather, in consequence of thunder showers, occurred, the temperature falling *thirty* degrees in eight hours. Heavy rains followed on the 10th and 11th, and the weather was more or less cloudy, excepting perhaps one or two days about the 15th, with indications of rain, and more or less of rain fell, till the 22d, a cloudy term of six days, during which the sun hardly shone, ending on the 22d. There was heavy rain on the night of the 18th, and more or less on the 19th, 20th, 21st and 22d. The remainder of the month was clear and fine, with rather too cool nights, however, and a heavy fall of rain on the night of the 31st.

In short, the spring opened very early—the ground being in condition for plowing in the latter part of March, continued very forward, and as a whole was very fine. The trees "arrayed themselves in green" with more than usual rapidity; cherry trees were in full bloom on the 9th, and apple trees by the 18th, at least, a week in advance of last year, ten days ahead of 1857, and three days earlier than the average for the last half century. Much planting was done quite early, and at the close of May, corn and potatoes were several days in advance of what they usually are at the same date.

The mean temperature of the spring months was 45.8°; of March, 37.14°; of April, 42.94°; of May, 57.31°. The mean temperature at sunrise was 39.86°; at noon, 51.35°; and at sunset, 48.35°; of March, at sunrise, 34°; at noon, 41.71°; at sunset, 39.51°; of April, at sunrise 38.4°; at noon, 47.73°; at sunset, 46.05°; of May, at sunrise, 47.2°; at noon, 65.52°; at sunset, 59.49°.

The warmest day was the 8th of May, the mean temperature being 72.5°; the coldest was the 2d of March, with a mean of 16.17°. The warmest day of March was the 18th, with a mean of 49.67°; of April, the 30th, with a mean of 55.17°; of May, the 8th, with a mean of 72.5°. The coldest day of March was the 2d, with a mean of 16.17°; of April, the 5th, with a mean of 32.5°; of May, the 11th, with a mean of 43.17°.

The highest temperature was 86°, (by my Fahrenheit thermometer, well adjusted,) though some thermometers indicated 94° at two P. M., on the 8th of May, and the lowest was 4°, at sunrise on the 2d of March. The highest in March was 54°, on the 28th; in April, 71° on the 30th; in May, 86°, on the 8th. The lowest in March was 4°, on the 2d; in April, 27°, on the 10th; in May, 35°, on the 16th.

The spring months were 2.2° (two and two-tenths) warmer than in 1858, and 4.58° warmer than in 1857. Only two frosts occurred in May—on the morning of the 16th and 22d—and both were generally light, doing but slight injury to crops.

Of the ninety-two days of spring, twenty-two were clear, twenty-two tolerably clear—the sun shining the greater part of each day—twenty-eight cloudy, and twenty others in which the clouds predominated, as follows; in March, four clear days, eight tolerably clear, *twelve* cloudy, and seven quite cloudy; in April, six clear days nine tolerably clear, seven cloudy, and eight quite cloudy; in May, *twelve* clear days, five tolerably clear, nine cloudy, and five quite cloudy.

Rain fell on twenty-six; on nine days in March, including five heavy falls; on five days in April, and on eleven in May.

The only snow storm, save a few squalls in the fore part of April, occurred on the 3d of March, with a fall of five inches; but frozen rain or sleet fell about the middle of April, and snow at the same time on the mountains.

The only thunder shower occurred on the 9th of May.

There were fifty-three days of wind from a northerly quarter, and thirty-six from a southerly; as follows: Twenty-seven from the north-west, twenty-three from the north-east, and three from the north; eighteen from the south-west, thirteen from the south, and five from the south-east. In March, ten from the north-west, five from the north-east, one from the north, four from the south, eight from the south-west, and three from the south-east. In April, *fifteen* from the north-west, seven from the north-east, two from the north, one from the south, three from the south-west, and two from the south-east. In May, but *two* from the north-west, eleven from the north-east, eight from the south, seven from the south-west, and three in which the wind was light, and there was no steady current from any point.

There were *eleven* haloes; six in March, three in April and two in May. Four displays of Northern Lights were noticed; two each in March and April. Three rainbows were observed in May, and one on the 19th was attended by the unusual phenomenon of *supernumerary* bows.

Springfield, June 8, 1859. J. A. A.

RAISE FRUIT AND EAT IT.

This is a fruit country. Nearly all farmers may raise their own fruit. Strawberries, raspberries, currants and gooseberries grow or will grow almost everywhere. They can be canned, and so preserved the whole year. Apples, pears, peaches, cherries, can be raised on most farms. There is no good reason why fruit should not be as plenty as corn or wheat.

This is a bilious country—that is, the people who live here are especially liable to bilious diseases. There is perhaps, no better preventive of

bilious diseases, than the constant use of fruit as a part of the diet. It corrects the acids and juices of the stomach, and assists digestion. It keeps the bowels properly active, and prevents that sluggishness and torpidity, which promote bilious derangements. Fruit, to do its best office in the diet, should be cooked and eaten as a part of the regular meal. Thus used, how delicious it is! How it adds to the pleasure of a meal to have it enriched with so delicate and agreeable an article of diet! And how chaste and elevating is the tendency of such a diet, compared with one of solid meat and bread. So it is. The best diet is really the pleasantest. Therefore let fruit grow on all our farms, and adorn, and make pleasant all our tables.—*Valley Farmer.*

NEW PUBLICATIONS.

HINTS TO HORSE KEEPERS, A Complete Manual for Horsemen; embracing How to Breed, Buy, Break, Use, Feed, Physic, Groom, Drive and Ride a Horse. And Chapters on Mules and Ponies. By the late HENRY WILLIAM HERBERT; with additions, including "Rarey's Method of Horse Taming," and Baucher's System of Horsemanship;" also, giving directions for the selection and care of Carriages and Harness of every description, and a Memoir of the Author. Beautifully Illustrated. A. O. MOORE & Co. 140 Fulton Street, N. Y.

One of the fine books of this celebrated publishing house. It has a full index, which will refer you to all you will ever wish to know about the horse. The type of the book is large and fair, and its mechanical execution is every way attractive. In speaking of the importance of the mare that is to be bred from, one of the off-hand dashing paragraphs, of which the book is full, is as follows:

"We now come to another, and by no means, secondary part of the business; that is to say, to the choice of the mares. And here we say that the first thing to be looked for is, not blood nor performances, but size and symmetry, accompanied, as a matter of course, by constitutional and structural soundness. Blood from the sire, beauty from the dam, is the golden rule of the breeder. We know it is commonly said by farmers, concerning some miserable, undersized, ewe-necked, cat-hammed wretch of a mare, broken-winded, ring-boned and spavined, 'O, she will do to raise a colt out of!' So she will! But what will the colt be? The breeder had better, for all purposes, have shot her at once, for the colt will not be worth the mare's grass."

The twenty-second chapter of the work is devoted to Veterinary Homœopathy, and gives it much value. The merits of the book will abundantly justify any lover of the horse to pay its price for it, $1,25; and its faults, if it have any, we leave for the reader to find out for himself.

COUNTRY LIFE. A Handbook of Agriculture, Horticulture and Landscape Gardening. By R. MORRIS COPELAND. Boston: John P. Jewett & Co.

This is a book of over 800 pp., on fine paper, elegantly printed, and embellished with numerous engravings. The complete index shows that scarcely a topic embraced in the subjects announced in the title page, have been omitted. The author is an acute observer, a deep thinker and an ardent votary to the useful art. The work, indeed, is a library in itself, upon the subjects which it discusses, and the most uninformed could scarcely fail of finding in it all that is necessary for his guidance in any of the departments of farm management, or in the more attractive pursuit of landscape gardening. Pressing duties have not permitted us to examine all the principles laid down, or all the practices which are commended,—but we have seen sufficient to make us admire the fine taste and great industry of the writer, and to induce us to wish that each of our readers may have a copy of this book on his table.

WELLS'S NATURAL PHILOSOPHY; for the use of Schools, Academies and Private Students. Introducing the latest results of Scientific Discovery and Research; arranged with special reference to the practical application of Physical Science to the Arts and Experiences of every-day life. With 375 Engravings. By DAVID A. WELLS, A. M. Fifteenth edition. New York: Ivison & Phinny.

This is not only a suitable book for schools and academies, but is a capital hand-book for the family—that is, reference to its pages would afford explanation to a thousand queries such as are always arising in the minds of an intelligent family. If such queries go unanswered, there is little if any progress in scientific knowledge,—but if such a book as this is often referred to, and its subjects are under frequent discussion, the family using it will soon be distinguished for its valuable attainments. The book is printed handsomely, has a full index, and ought to be upon the shelf of every person who cares to know anything of *natural* philosophy.

COUNTRY SCHOOL-HOUSES: Containing Elevations, Plans, and Specifications, with Estimates, Directions to Builders, Suggestions as to School Grounds, Furniture, Apparatus, &c., and a Treatise on School-House Architecture. By JAMES JOHONNOT. With numerous designes by S. E. HEWES. New York: Ivison & Phinney, 321 Broadway. Chicago: S. C. Griggs & Co.

Every town in New England, about to rebuild its school-houses, ought to be in possession of this book. It will afford so many suggestions, and point the way, step by step, so closely, as to make any intelligent committee, master of the subject they have in hand. It is an important point gained in building, to know, ourselves, what we want, and how, and for what prices, it ought to be done. The work is handsomely illustrated with numerous designs, and floor-plans, together with the furniture of the school-rooms, inkstands, book-cases, &c. The book should be in every town library in the State.

BOOKS IN JAPAN.—Whoever walks through the streets of a Japan town or village, will be surprised to notice the number of books exposed for sale in almost every shop. On looking inside he will probably find one or more of the atten-

dants, if otherwise disengaged, busily reading, or listening to something being read by one of the company. In walking through the outskirts of the town, it is not unlikely he will come suddenly on a knot of children, seated in a snug corner out of the sun, all intensely engaged in looking through some story-book or other, they have just bought at a neighboring stall, and laughing right heartily at the comical pictures which adorn the narrative. The conviction is thus brought home to a man's mind that the Japanese are a reading people.—*London News.*

For the New England Farmer.

LETTER FROM THE SANDWICH ISLANDS.

MAKAWAO MAUI, HAWAIIAN ISLANDS,
FEBRUARY 12, 1859.

MESSRS. EDITORS:—*Gentlemen,*—Dec. 30th being our Hawaiian thanksgiving day, I wrote you giving some account of the increase of our comforts for the physical or outward man since I took up my residence at the islands in 1828. Let me now speak of other things pertaining to the agricultural interests of the islands up to the present time, beginning at Hawaii, the most southern of the group, and ending at Kauai, the most northern, as you will see by looking on a map.

Hawaii is much the largest of these islands. I have resided on that island and, have travelled around it. But for its being the seat of Pele's dreadful reign, it would be the most important island, having the largest forests, the loftiest mountains, most extensive fields for cultivation, the greatest variety of climate, and spacious bays. But we have some fears on account of the late eruption of the volcano on Mauna Loa. In 1855 we trembled when intelligence from Hilo reached us lest one item should be that that beautiful village had been destroyed by the rivers of molten lava which rolled their burning waters till some six or eight miles only remained between them and Hilo. Had they reached this village, they would have disgorged themselves into Byron's Bay, destroying probably the most spacious harbor on the islands. God spared our friends their village and harbor, seemingly saying to the burning liquid, "Thus far shalt thou go, but no farther, and here shall thy proud waves be staid."

January 23, only about three weeks ago, our friends of Hilo were again startled by the sight of the burning lava gushing from the same place apparently as in 1855. It was at first supposed that it would pursue the course of the former one, and make for the Bay of Hilo. But it is now well nigh certain that the flow is toward the west or Kona side. But more of the doings of Pele at some other time. I am to tell you of the agricultural interests of the island.

At Kau, the southern district of the island, at the station occupied by Rev. Mr. Shipman, the people have during the year engaged in the business of wheat raising. A few hundred bushels have been produced and sold, and the hopes of the farmers are raised that the product thus gathered will be profitable. From my recollections of this district, from having once passed through it, I should say there is a wide field for this enterprise. I am now writing to Mr. Shipman, making various inquiries respecting the extent of this district, and the prospects of wheat-growers, and I may speak to you again respecting this portion of Hawaii. Other than this commencement of wheat growing, I have heard of no new agricultural enterprise on that island. There have all along been many important native productions carried to Honolulu, such as Pia, or arrow-root, Olona or Hawaiian hemp, suitable for fish-nets and rope, Pula, a material much used for bedding, potatoes, yams, coffee, oranges, &c. The latter fruit of an excellent quality is rapidly increasing, and it is said that American apples are being raised on that island.

On Maui, wheat is becoming one of our staple productions. In my former letter I told you of the number of bushels raised the past year. Much more land is being sown this year, and unless the cut-worm shall destroy more than in ordinary years, the amount of wheat will be much larger than ever before. We have a small mill at length, at Wailuku, some ten or twelve miles distant from our wheat fields, where we can procure grinding for toll. This is a favor. Other things of an agricultural nature on Maui are much as they have been for many years. But for the cut worm the labors of agriculturists would rapidly increase; but the ravages of this insect are most discouraging, and we know of no remedy. For a while we cherished the hope that frequent and thorough cultivation would do the business for this implacable enemy of wheat, corn, beans and garden vegetables; but such is not our experience. Can any reader of the *Farmer* tell us how we can escape this scourge?

The best gardens on the group are at Lahaina and Honolulu. I know not how gentlemen there protect their tender-springing vegetables from the ravages of insects; but I am glad to report the raising by them of fine beets, turnips, and other comforts, such as New England gardens furnish. I am confident that our island home will, ere long, abound in fruits of an excellent quality. Last year I had in my garden alone some ten barrels of peaches, and there were as many more in three other gardens in the neighborhood. We abounded, also, in figs, had a few oranges, guavas, citrons, chirimoya or custard apple and water lemon. As yet, I have not succeeded with the American apple, and much fear that this fruit will not do well on Maui. Still, we shall not give up the hope without further trial. I am hoping to see the orange and peach flourishing in native gardens. The orange and fig are both nutritive and exceedingly healthy. Just now there is nothing like wheat in the estimation of my people, but they will learn, ere long, that the cultivation of fruit is a cheaper method of obtaining a living. Oranges, too, can be exported to San Francisco, and will be profitable, I think. On Kauia the natives have made the raising of sweet potatoes, for a few years past, quite profitable. They have exported them to San Francisco, and have had very fair returns. Sugar and coffee have been exported from this island,* but these are produced by the capital of foreigners, and I do not take them into account in this report.

In my letter of Feb. 11, 1857, which you gave your readers in the July monthly *Farmer*, I re-

* So on Maui, largely.

ferred to my old neighbor and associate, Mr. Bailey, of Wailuku, whom I had requested to write you. On seeing it in print, I fear that either Mr. Bailey or his friends will mistake my meaning. I spoke of his having developed a state of mind which forbids, I think, all hope of his writing for any periodical. I should have alluded to the cause, failure of health, which affected his mind, and I should have qualified my hope of his writing for any periodical, by adding, unless his health shall be restored. Just as I write of my own excellent wife at the present time—she has developed a state of mind which forbids her writing to her own relatives. With Mr. Bailey I have lived many years on terms of affectionate intercourse; and I utterly deny having written the paragraph from a wish of casting a reflection on him as a man or a Christian; no such thought entered my mind. He has lately visited the United States, and I hear he is returning to his island home in renewed health. This I rejoice to hear, and I hope he will be spared long to labor for his people and to aid in developing the resources of the country. If you think these letters worthy of being published, please give your readers what I say of Mr. Bailey in this closing communication, and greatly oblige your unseen friend at Makawao.

J. S. GREEN.

P. S.—I will give you, if spared, something more ere very long, concerning Pele, and the effects of the late disturbance on Hawaii from the outpouring of the molten floods. Many from Oahu and Maui had gone thither to gaze on the wonderful displays of divine power now being there exhibited. With respect yours, J. S. G.

For the New England Farmer.

LITTLE THINGS:

OR, A WALK IN MY GARDEN....No. 18.

I have been transplanting some tomatoes today from the house to the garden. It has been quite a little study with me to ascertain the best method of starting different plants in the house, and then transplanting them to the garden without disturbing their roots. I have hit on a plan partly original with me, or else I have forgotten how I came by my knowledge of

TRANSPLANTING PLANTS.

Take common saucers, and fill them just full with rich earth; then cut circular slices of turnip an inch in thickness, but not quite so large over as the top of the saucer, cut a hole an inch in diameter through the turnip, lay it on the earth in the saucer, fill the hole with the same soil as in the saucer, plant your seeds in the hole, water the earth by pouring it into the saucer; capillary attraction will carry the water to the plant.

Now for the beauty of the thing; when you wish to transfer to the garden, prepare your hills, and slip all the contents of the saucer with a case-knife into the hill, slice down the turnip on two sides, and let it remain, or take it away, as you please. Squashes, cucumbers and melons can be transplanted in this way without being checked at all in their growth. The whole process is so simple and so effectual, that I recommend it with entire confidence. The turnip serves to prop up the plant, while it prevents the evaporation of the water. You do less injury to the plant by pouring the water into the saucer, than by pouring it on the plant itself, while the fibrous roots have so incorporated themselves with the earth that it may be slid out of the saucers in a mass. Try it next year.

SPROUTING POTATOES.

I accidentally learned a new lesson the past spring in sprouting potatoes. I put them into a cask, and placed some earth on the top of them, but did not mix it with them, and poured on a little water and set them in a warm room. They sprouted in a short time, and when ready to plant, I sawed off the hoops and let the potatoes out, when I found that although the sprouts were quite long, the rootlets had not started at all, so that I could place them in the hills without breaking the sprouts, as is very apt to be the case when they are sprouted in earth, where they form a perfect matting of roots.

PEAR AND APPLE TREES.

While walking in my garden the other day, I was led to notice a half-dozen pear trees of as many different kinds, that stood the winter perfectly well, while several seedling young apple trees in the same situation, were killed to the ground. Why this in favor of the pear trees, I cannot tell.

GRAFTING.

Apple trees that I grafted on a warm day, before the snow was off the ground, have taken finely, while those I grafted the last of April, seem to have been affected by the extreme warm weather the first of May. I believe there is no danger of grafting apple trees, (I speak of large trees,) as early in the spring as possible, provided there be weather sufficiently warm to make the wax adhere to the trees. Such has been my experience for ten years past.

N. T. TRUE.

Bethel, Maine, 1859.

For the New England Farmer.

AN UNUSUAL PHENOMENON.

Thursday, the 19th of May, was cloudy and very threatening, a little rain falling at ten in the forenoon, and at sunset. At sunset, there was a very beautiful rainbow, the primary bow continuing unbroken and very bright for about fifteen minutes; but the secondary was quite dim. Within the primary, were two distinct arches of red, with a green one visible between them at times. These arches, called in meteorology supernumerary or supplementary bows, extended the greater part of the length of the primary bow, and were visible for ten minutes, even till after the sun had passed below the horizon.—This phenomenon is spoken of as occurring very rarely by meteorologists. I have observed it but twice before. On the 14th of August, 1857, there was the most beautiful rainbow I ever witnessed, occurring after a thunder shower. At about ten minutes before sunset, these supernumerary bows appeared, one after another, till five were visible in the highest part of the arch, within the primary bow, continuing till after the sun was just below the horizon. Those nearest the primary bow

were broadest and brightest; the others successively fading, shortening in length, and becoming narrower. These were red, the first and second vieing with the colors of the primary bow, with a green arch between them. I never saw them when the sun was more than ten or fifteen minutes high; and its nearness to the horizon probably has something to do with its formation.

Springfield, May, 1859. J. A. A.

For the New England Farmer.

LABOR-SAVING MACHINES.

Messrs. Editors:—I believe no industrial class in the world is capable of more real enjoyment and independence than the farmers of New England, and yet many farmers among us avoid an agricultural journal, or a labor-saving machine on their farms, or in their farm-houses, as if of no possible use.

Now, brother farmers, why do we so? Can any of us really afford to do without the agricultural experience of our best and most enlightened cultivators of the soil? I am one of those who are obliged to study economy, and have to ask concerning this or that new thing, which is crowded into public notice, "Will it pay?" It is not always easy to distinguish between a good thing and a humbug. Thus, for instance, when the mowing machine came into notice, I doubted a year or two, then purchased a Ketchum's; it paid well, (though others may be better.) I get more grass, get it quicker, and get it better. Delano's Independent Horse Rake has frequently nearly paid for itself in one day just before a shower or rain storm. Then in the house! How much annoyance from green wood, want of conveniences, want of suitable implements, &c. &c.

Now, then, in the house, he who regards his wife's strength, health and comfort, let him procure a metropolitan washing machine, and on Monday, when he comes home to dinner, washtubs, soap-suds, a cold dinner and ill-humor will be among past recollections. If that implement does not pay in saving labor and saving clothes, I do not know what will. In this I speak from nearly two years' experience. Have any of your readers ever purchased ready-made clothing, and soon after found by inspection that it was only very nicely basted together? Have they ever heard their wives say, "I find it very difficult to do all my sewing." Do they sometimes sit up very late at night to accomplish it?

A year ago, I examined all the machines for sewing, which stand in favor, and after much consideration bought one of Wheeler & Wilson's, and made a very fortunate selection; it pays well. It sews any thing, from a muslin to a bed-quilt, and a stitch alike on both sides. It is the admiration of the household, and male and female alike use it successfully. For those of moderate means, the $50 cheap style are probably most desirable, as they do the same work with the same speed. All inferior machines will eventually find a place in one corner of the garret. Therefore, if you desire to please your wife, either get a good "Wheeler & Wilson," or a "Singer," or a "Grover & Baker;" but for family sewing, we prefer the Wheeler & Wilson machine.

Middlefield, Ct., 1859. P. M. Augur.

TRANSACTIONS OF THE WORCESTER NORTH AGRICULTURAL SOCIETY.

The first remark suggested by looking over this report, is, that the statements are full and particular, and contain many practical suggestions by men competent to make them. The statements upon Plowing show that the importance of this leading operation of the farm is fully appreciated. The statements of the competitors upon stock and poultry are full and distinct. That by John Brooks, Jr., upon feeding stock, is the marked feature of the report. His experiments were obviously conducted with care and accuracy, and the results are of much interest to all feeders of milch cows. We are glad to see such experiments encouraged. The society deserves praise for offering a premium for this object. We hope many such experiments will be made in all parts of the State. The plan pursued by Mr. Brooks is a model for others to follow. We should judge that there must have been a fine exhibition of fruit, and are glad to see that the flowers were not forgotten. Seven dollars and fifty cents were awarded for flowers, and we had occular proof at the time of how much they added to the pleasure of the show, and tended to give a stimulus to this most delightful branch of garden culture. The most strenuous objector to women's rights, certainly cannot object to her right to cultivate flowers, and exhibit them too.

The report of the committee on farms and the statement of Mr. Hartwell, respecting the cultivation and products of his farm, are valuable papers. The report of the committee on orchards, and the statements of C. C. Field, Jabez Fisher, the President, and John Minott, show what may be done in this department. We commend these papers to all engaged in cultivating the apple.

We are particularly pleased to see that numerous and liberal premiums were awarded for grain crops. The statements upon these subjects are valuable, and encouraging, showing, as they do, that large crops of corn, rye and wheat may be raised by proper care and attention. The offer of premiums for the same objects for the next year, show that the society duly appreciates their importance. The report shows the society to be in a prosperous condition.

POTASH—SAND—PHOSPHORUS.

No vines can produce fruit without potash. Dye-woods and all color-giving plants owe their vivid dyes to potash. Without it we cannot have a mess of peas. Where it exists in a natural state in the soil, there we find liguminous plants growing wild, and in such places only we find wild grapes. All the cereals require potash, phosphate of magnesia and silica, which is dissolvable in a solution of potash. It is this dissolved sand that forms the hard coat of stalks, and gives

them the strength to stand up against the blasts of wind and rain while ripening. It is this substance that gives bamboos their strength, and beards of grain and blades of grass their cutting sharpness. No cereal ever came to perfection in a soil devoid of potash, silica, phosphate of lime, carbonic acid and nitrogen.—*Maine Farmer.*

For the New England Farmer.

VALUE OF RUTA BAGA—THE ONION CROP AND THE MAGGOT.

MR. EDITOR:—A correspondent in your paper of the 11th of June says that he has raised ruta bagas until he is satisfied "that they are not worth the trouble of raising." This is truly a sweeping condemnation of a root, which is considered the most important one raised in Great Britain, the failure of which for a single year in that country, would, according to a very high authority, be a greater calamity than the failure of the Bank of England. I would suggest with all due respect, whether such an article should find a place in an agricultural newspaper, without a simultaneous comment from the editor; a word of caution, at least, to the unreflecting. We all know that many believe, and are influenced in their belief, by any statement they see in print. Ink in the form of type is gospel to many readers. I should like to have had you say, "The remarks of our valued correspondent on the subject of ruta bagas are startling and novel; they conflict with the experience of half a century, and with the recorded wisdom of our most scientific agriculturists. We should like to have our correspondent furnish us with the data which has led him to the conclusion that this "root is not worth raising."

Your esteemed correspondent, J. W. PROCTOR, in the same paper, in speaking of the maggot in onions, says that no method has yet come to his knowledge of checking its progress. Now there are some secrets in agriculture as well as in trade; and perhaps it may be that some growers are successful, because they have discovered, but have not divulged the reasons for their success—they may not be aware themselves, why it is that they do succeed. Permit me to offer a remedy; it will do no harm to try it. Soak the onion seed for thirty-six hours before sowing, in strong soap suds, and I do not believe a single maggot will be found in the plants. It is not too late to try the experiment the present season, though too late to plant for a crop. I do not speak positively; at the same time, if I had ten acres of land ready for onions, I should plant the whole of it, without fear of the maggot, soaking the seed as I have suggested. ESSEX CO.

REMARKS.—We adopt, with pleasure, the language suggested by our correspondent. We often refrain from remarks upon the articles of our friends, because we do not wish to present the appearance, even, of being an infallible teacher. We stand in doubt, every day, in regard to some things, and earnestly desire not to be over-positive in any assertion. But that ruta bagas can be raised with permanent advantage to most of our farmers, *we have no doubt.*

EXTRACTS AND REPLIES.

EFFECTS OF FROST.

After the last frost, June 5th, I observed that a row of corn next my wheat piece, and parallel with the same, was completely killed, while other portions of the field, even near the water, were hardly damaged. Can you explain why this is so? N. DEARBORN.

Deerfield, Me., June 11, 1859.

REMARKS.—The water, near the corn, having stored up heat from the sun's rays during the day, was warmer than the atmosphere. The warm evaporations from the water were probably carried over the corn plants, and kept the temperature just above the freezing point. We have observed this result several times during the present month, on the banks of a stream. Near the stream and on the low grounds, there was a mist or fog and no frost, while on contiguous land, a little higher, vegetation was frost-bitten.

CROPS IN MAINE.

The weather here has been warm and delightful since the first of May; grass and grain look extremely well, just rain enough to suit all round, and but four cloudy days in the last six weeks. The farmers have got in a very large quantity of oats, potatoes, barley and other spring crops, which are all up finely. I have corn up and as forward as I used to have it in Massachusetts. This is truly a fine grazing country, this is a good country for farmers of all classes, either rich or poor, soil cheap and productive, climate healthy, water the best in the world, timber cheap, and everything to make home pleasant and happy. The pastures are dotted with cattle, sheep and horses, the fields and meadows with waving grain, and the woods with evergreens, and the lakes with trout, red sides and blue backs.

Rangeley, Me., June, 1859. J. CROWLEY.

CULTURE OF THE FRENCH TURNIP.

I am in want of some fertilizer for French turnips. Which shall I use, guano, superphosphate, or poudrette? How much to the acre to produce a good crop by sowing it broadcast; and also, whose make? Where I use a machine for sowing the seed, must the land be plowed, cultivated or harrowed in order to get the manure near the roots? I find when the manure is near the surface they are apt to be spongy and ugly shaped things. S. DENHAM.

South Hanson, June 4, 1859.

REMARKS.—After a liberal dressing of barn-manure well mixed with the soil, we have found good superphosphate of lime, 300 to 500 pounds per acre, more advantageous than anything else for a turnip crop. Prof. Mapes manufactures a good article, so does Coe, and perhaps others. The land should be well pulverized and the seed sowed on ridges of eight or ten inches in height, —but that must depend upon the nature of the soil.

A NEW TRANSPLANTER.

I forward for your inspection an instrument I have invented for transplanting vegetables or flowers without disturbing the earth around their roots. A gentleman in this city removed over 100 strawberry plants in full bloom the other day, and he says they did not wilt at all. If it meets with your approbation, you will much oblige a constant subscriber to your valuable monthly by a friendly notice of it in your paper.

JOHN BURGUN.

Concord, N. H., June, 1859.

REMARKS.—Certainly, friend Burgun, you shall have a friendly notice, or rather the "Transplanter" shall, because it is a labor-saving, as well as plant-saving, and very convenient article. The house you mention is a good one to sell for you.

—

PROSPECTS FOR FRUIT.

The peach crop is an entire failure this year. Apples now look well, and I hope were not injured by the frost of the 5th inst. Pears look well. Strawberries, (now ripe,) in abundance. A fine prospect for a large crop of Lawton blackberries. Currants and gooseberries full. Grapes were somewhat injured by the winter—about half a crop. We have had a fine spring for the growth of all crops, and the prospects are good for the farmers.

SYLVESTER.

Lyons, New York, June 8, 1859.

—

A COLT'S HIND FOOT.

I have a yearling colt which has a bunch on the fore part of hind foot, between fetlock joint and hoof. It appeared March 1st, has increased to three fingers' width, and extends nearly round the foot.

Can you or any of your correspondents suggest a remedy?

E. P. CHASE.

Deerfield, Me., June 11, 1859.

—

CISTERNS.

I wish to inquire through your excellent paper the best and cheapest way to construct a cistern for the purpose of watering farm stock. I think you published an article about a year since, in which the writer recommended digging in the same manner as wells are dug, and then simply lining it up with cement, puting on two or three coats. Can one be made in that way and be durable, or will it be necessary to brick it up and then cement on to them?

Haverhill, Mass., June, 1859. N. P.

For the New England Farmer.

WINTER-KILLING OF GRASS.

On all hands, I learn, the prospect for a crop of grass is good, where it was not winter-killed. What is to be understood by this phrase? Is it simply, where the ice had so formed as to adhere closely to the grass, and in this way to destroy the vegetating power of the plant, or is it some other operation or process?

I have witnessed this effect on fields of rye, to a considerable extent. I have a strong suspicion that what is sometimes called winter-killed, proceeds from causes that operated before the commencement of winter.

This is no trifling effect on some fields, extending to a quarter or more of the expected crop. I should be gratified, Mr. Editor, if you, or some of your experienced correspondents, would explain this matter. As has been before remarked, the farmers of this county realize more money from the hay they send to market, than from any other product of their farms. Whatever, therefore, diminishes their prospect of income one-fourth part, becomes an essential consideration in their farm management.

ESSEX.

June 13, 1859.

For the New England Farmer.

THE BEST MOWER.

MR. EDITOR:—Permit me to avail myself of the medium furnished by the columns of your useful and impartial agricultural sheet, for the purpose of saying a few words to the farmers, to whose homes it makes its weekly visit, concerning mowing machines.

Our little town was all astir yesterday, with excitement occasioned by an exhibition and trial of mowers, on the farm of Capt. LAMBERT LAMSON. Though your correspondent intends to speak principally of this occasion, he would say that he has often witnessed the operations of some of the rival mowers used in this section of the country, and consequently whatever opinions he may advance, are not based entirely upon the proceedings at this trial.

The machines put upon trial were Ketchum's improved patent, 1859, mower, both one horse and two horse, manufactured by Nourse, Mason & Co., Boston and Worcester. Manny's patent mower, also one and two horse, made by Alzirus Brown, Worcester, and a one horse Ketchum mower, made down in Connecticut. The trial was first between the one horse machines, each of which cut two swarths on the side of the field. The Manny began, followed by a Ketchum machine from Connecticut, and then by the Ketchum machine from Nourse, Mason & Co. The Manny mower did its work well, but its swarth lacked the evenness and smoothness of the Worcester Ketchum's when raked. It cut a swarth three feet six inches wide. The Ketchum (meaning always the Worcester machine) cut a swarth four feet wide, and its work was satisfactory to all the spectators. I underatand that this machine, cutting four feet, was strictly a two horse mower, but placed upon trial as a one horse machine by the proprietors, in the complete confidence of success. The regular one horse mower, I was told, cuts three feet, six inches. Another circumstance worthy of notice, is the fact, that the horse used with the Manny mower was taken fresh from the barn, and harnassed to the machine, whereas the horse used with Ketchum's had cultivated corn all the forenoon at Worcester, and had been driven ten miles since one o'clock, and was harnessed to the machine at two and a half o'clock. Yet, notwithstanding its advantages in shortness of cutting-bar, and freshness of horse, the Manny mower was inferior to the Ketchum.

After the different one horse machines had each cut two swarths on the side of the field, it was proposed that they should cut a double swarth, and the Ketchum immediately entered the middle of the grass, and performed its work in such a manner as to render its superiority still more striking. Nothing can exceed the beautiful manner in which this perfect little mower accomplished its task, and by the almost unanimous consent of the unprejudiced portion of the spectators, it was acknowledged to be the best and most complete one horse machine on the field, or in the market. Although, for many important reasons, the trial of the two horse mowers was an event of less interest than the trial of the one horse machines, still I would not deny to them their just amount of attention.

Whatever superiority the one horse Ketchum mower may have possessed over its rivals, when I say that in less than five minutes, it was transformed into a two horse machine, cutting a swarth four feet, six inches wide, (the only change being the substitution of a pole for the shafts, and the longer bar for the short size) it must be evident to all, that the same superiority remained with it, and the superiority of the two horse Ketchum mower was no less apparant, and no less appreciated, than in the case of the one horse mower. In fact, would it not be a good idea for some of our farmers to have the machine arranged for one or two horses? I presume they could do so, cheaply.

But the greatest novelty of the occasion remains to be mentioned. The proprietors of the Worcester Ketchum, not content with the success of their one and two horse machines, desired permission to mow with one of somewhat heavier build, cutting a swarth *six* feet wide. The attempt was not only another success, but an agreeable surprise to the numerous spectators. I did not see that the horses labored much harder with this, than with the other machines of less capacity. It presented a truly noble appearance, as the tottering grass came tumbling down, and having finished its double swarth, the opening of twelve feet of cut grass presented quite a gap to the eye. I would sum my account of this trial, by saying that, upon the whole, its result was a decided triumph of the Ketchum improved patent mower of 1859, manufactured by Nourse, Mason & Co.

Permit me to consider now, for a moment, some particulars which it would be well for a farmer to notice in buying a mower. When he is unable to make up his mind as to which mower is best, he naturally inquires the cost, weight, draught and other characteristics of the rival machines, respectively. I was able to gather these facts concerning the machines exhibited, from the circulars and politeness of the proprietors of each.

The Ketchum two horse mower cuts a swarth of four feet, six inches wide, weighs 480 pounds, and costs $85. The two horse Manny mower cuts a swarth four feet, four inches wide, (two inches narrower than the Ketchum,) weighs 750 pounds, (270 pounds more than the Ketchum,) and costs $110,—$25 more than the Ketchum. My experience teaches me that the Ketchum mower has the least draught. I was also impressed very favorably with the simplicity and durability of its construction. Being entirely of iron, the parts are much lighter, at the same time stronger and more durable, than those of the Manny, which are principally of wood. In conclusion, I would confidently recommend to the farmers of New England, as the result of careful observation, the Ketchum improved patent 1859 mower, as the best in the market. Adding that these ideas, though well founded, are hastily put on paper. TRUTH AND JUSTICE.

Boylston, June 15, 1859.

For the New England Farmer.

A SICK COLT---STAGGERS.

MR. EDITOR:—In looking over the *N. E. Farmer* to-day I noticed a communication from "W. D. Sear," describing the case of his colt, which I understand to be what is generally denominated staggers, which arises from congestion of the brain and lungs, with loss of tone in the digestive organs and very unequal circulation of blood.

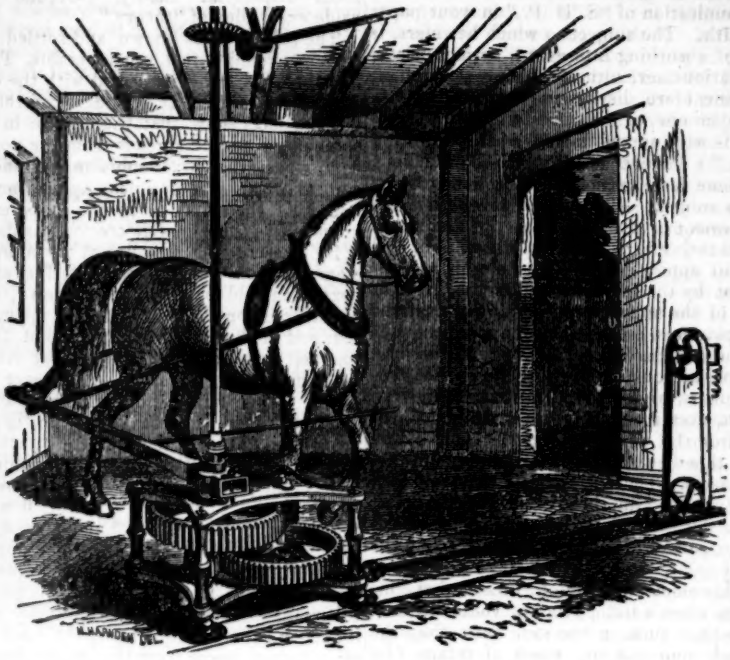
I had a work-horse badly affected this spring, and within the last eight years have seen perhaps a dozen in all stages of the disease. I have directed to keep the animal warm and dry, to rub the limbs twice a day with common spirit and cayenne pepper, and gave them a quarter of a pound of a deobstruent powder, to be given one teaspoonful in bran or oats wet, three times a day, or if the horse was down and would not eat, put the powder in a junk bottle of warm water and pour it down, saying, if it cures your horse, give me a dollar, and I have always got my dollar. LAWSON LONG, M. D.

P. S.—A moderate bleeding from the nose is proper.

Holyoke, Mass., June, 1859.

RINGING THE GRAPE VINE FOR FRUIT.

The practice of ringing, or cutting off the bark of the branches of trees bearing fruit, for the purpose of enlarging and improving the quality of the fruit, is beginning to be better understood and more practised. At Bordeaux, in France, there was recently exhibited portions of a vine of the Chasselas variety, which had bunches of very unequal size and quality. The bearing shoots which had been left to themselves, had only bunches of grapes in the common condition, while the contiguous ringed shoots each bore a superb bunch of magnificent grapes, each twice as large as the grapes borne by the same piece of wood that had not been ringed. This was the case in every instance where one shoot had been ringed and the other had not. In the opinion of the exhibitor, the advantages of ringing, are a fortnight's earliness, finer berries, and better quality. The practice of ringing, consists in removing a ring of bark something less than half an inch wide, just below the insertion of the bunch to be experimented upon. The only difficulty to be encountered is the danger of cutting too deep. The time for ringing, is when the vine is about to flower. The shoots selected for this operation are those bearing ones which should be pruned off next season, as the ringing of course destroys the branch with the maturity of the fruit.—*Michigan Farmer.*



FIELD'S HORSE-POWER MACHINE.

For the New England Farmer.

FIELD'S HORSE-POWER MACHINE.

MR. EDITOR:—Knowing your deep interest in everything pertaining to the farmer, and especially in improvements which tend directly to lessen the labor of farming, I send for publication in your valuable periodical a few items in regard to a horse-power machine which is manufactured by Mr. William Field of this city. This machine is peculiarly adapted for doing the following kinds of work—threshing, shelling corn, sawing wood, grinding, pumping water, &c.

It might be useful also, in materially lessening the labor which usually falls to the lot of females on large farms. With the aid of a rotary washing machine a day's washing could be accomplished in an hour; and by a very simple and cheap arrangement the same power might be made to do the churning.

These machines are durable and compact, simple in their construction, and being made entirely of iron and steel, are easily kept in order. They can be operated by any number of horses, from one to eight, according to their capacity; size adapted to one or two horses, weight about eight hundred pounds; measures a little more than two by three feet square, and costs one hundred dollars, including either the horizontal or perpendicular connecting shaft and gear. The upright power is preferable when it is to be used in a building where there are timbers overhead to which the shafting can be secured. For out-door work the horizontal power is required. A space of twenty feet in diameter is required for the sweep of the levers and a travelling space for the horse. A shed divided into several apartments to accommodate the various kinds of work, and a horizontal shaft geared into the perpendicular shaft, (as shown in the cut above,) extending through the building, and connected by pulleys and belting with the machinery in each room would be a convenient arrangement.

Nearly every farmer cultivating twenty-five or fifty acres would find the horse-power a profitable investment, as he would be enabled by the above arrangement to accomplish in a single day the work of six days. This would enable the farmer to get his produce to market much sooner, in better order, and cheaper than formerly.

These last considerations have induced me to forward the above article. Yours,

Providence, June 25, 1859. B. D. BAILEY.

TO CORRESPONDENTS.—Thanks for numerous articles from correspondents. If some of them are delayed a little, it may be because others are upon subjects a little more applicable to the season. But most that are received will be forthcoming in good time.

For the New England Farmer.

POTATO ROT.

MR. EDITOR:—I have read with some interest the communication of "S. H. P.," in your paper of May 14th. The subject to which he refers, is still one of absorbing interest to agriculturists; and the various agricultural journals throughout this continent are discussing the question, so long an open one, of the cause, and for the remedy of this wide spread malady. In answering "S. H. P.," I believe I can place before your readers some facts, which will throw new light upon this subject. He says he never has seen "any statement of the symptoms" of the potato blight and rot. The "symptoms" that blight and disease will appear in the potato crop, are revealed first by the indications, and the fact that the eggs of the aphis are found in perforations in the epidermis of the potato, and in the eye socket and bud-part of the sprouts, at the time the potatoes are dug, and, as are easily seen, before the tubers are planted. He says, "The disease commences its ravages the last half of August, or from 1st to 10th of September." The causes of this disease, may be traced to the attack of insects. They begin their destruction of the vines, at the vital neck joint of the stalk, nearest to the seed tuber, under ground, and at such time, earlier or later, as influenced by the warmth of solar, or artificial heat, to sprout the tubers. This elementary action, animates the insect's eggs, when a living, active, voracious enemy commences sucking the sap, extracting the vitality and nourishment, which, if retained by the vines, (as was the case thirty or forty years ago,) would cause a continued growth of the plant, long beyond the "last of August, or 10th of September." This shows that the "mischief is not done very suddenly." A slow poison spreads from the point where these insects make their attack, and that is the remote cause of sudden decay, by cutting off the nourishment.

The insects, in their larva or grub age, (in their secluded position under ground,) communicate the "poison to the juice of the top," which poison is admitted by "S. H. P." He "theorises" for "poison." I point out the enemy, and tell where to find him while communicating the "poison." Let me here ask, if this fact of insect ravages is not far more reasonable to believe as the cause of the "poison," than to theorize about the "temperature at 76° to 80°, or southerly or south-west winds blowing briskly, or more or less rain, or heavy mist, or fog." Is it possible that, this "wind blowing briskly" can be seen on the potato or plant, so as to be recognized, definitely, as a "symptom" of disease?

What have these various influences which have always existed, to do *now* in causing the potato blight, that they did not exercise forty years ago? Why does this "atmospheric influence or epidemic," act so destructively upon the potato now, and leave the corn, beans, tomatoes and other vegetables in perfect health and vigorous growth, the same as forty years ago? You, and all must admit, that something acts upon this plant now, that did not seriously affect it previous to 1843. "S. H. P." asserts that, "if this poison in the top is correct, it upsets the bug theory." I deny that there is any such thing as "theory" touching insect depredation, and the influence of insects, causing this malady. The occular demonstration of their ravages at the roots dispels all "theory." Occular facts set aside every idea of "theory."

The subject thus known and settled by facts, becomes definite, real, unanswerable. Therefore, no "theory" can be connected with the question. Neither speculation or argument can rebut facts. Occular facts show that, the disease in the stalk commences at, and spreads from the point at the root where the larva aphis makes the attack; and no brown rust, or poison appearance, can be found on the stalk, or at the roots, except on vines where these insects are found subsisting.

By dissecting such stalks, at the more mature stage of their growth, commencing at the end next to the old parent tuber, a brown, rusty appearance is found, and a withered appearance of that end of the vine. From this point, the brown rust can be traced, with the natural vision, into the capillaries of the stalks, and thence the poison is re-transmitted through the stem to the growing tubers, and is imbibed in the latter, in proportion to the virulence of the attack. It mingles with the healthy, vital, life-sustaining element of the plant. Its progress and the result may be compared to a reptile's poison flowing from the spot where the poison fang is placed, through the veins to the vitals of the unfortunate object attacked. The blight in the plant follows the insect's attack. The vines above the ground and tubers at their roots sympathetically show the influence; the principle being the same as death to a human being from the poison fang of the reptile. The insects deposit their eggs in the epidermis, the sprout, or bud-part, while the tuber is very young and growing, and are firmly imbeded in the trunk or embryo of the vine for next year. In this nidus, they are hibernated.

When the tuber is planted, as before described, the insects start into life, and by the instinct of the parent, placed where surrounded by juice, or sap, they pump or draw it from the vine. Thus, while subsisting in a suctorial manner on their natural element, they poison and deteriorate the plant. The secret source of this malady is found here—these secluded enemies inherently transmit this world-wide disease from one generation of tubers to those of the succeeding year's growth. Microscopic research unfolds the mysterious works of the Great Creator. By thus viewing, with microscopic power, the minute particles of dust, (as seen by the natural vision,) we learn facts revealing His power, and showing our own superficial knowledge. Year after year, scientific men and agricultural laborers, have tasked their utmost talent and powers to little purpose in revealing the cause of this wide-spread malady. But more recently, the microscope has revealed the botanical condition of the tuber, showing clearly the entomological connection, and the cause, and thus pointing out the fountain from which this malady springs. The array of insects at the roots of the plants is an occular demonstration, that no theorizing or arguments can repel. It is no "bug theory." There is a real aphis sucking the vitals of the plant. Their eggs and the definite embryo have been searched out, and made visible with the microscope, as be-

fore described, in the very skin, sprout and bud-part of the tubers.

Who ever doubts this assurance, or attempts to repel the fact, may as well attempt, at noon-day, to disprove the existence of the sun. I "advance" this fact of identity with "confidence," that ocular proof will baffle the exertion of those who may declare it a fallacy, or attempt its "overthrow."

"S. H. P.," says, "The advocates of this theory will ask, why the atmosphere did not affect the crop previous to 1843." I have previously referred to this, and I want "S. H. P." to answer it himself. I reply to his "Yankee-fashioned" question, that, the insects are doubtless descendents from the garden of Eden.

Natural causes and fixed facts, arising from changing events, in connection with our philosophical judgment, will furnish abundant answers as to the phenomenon why "such bugs" are now found on the potato. By inherent transmission, year after year, from tuber to tuber, these insects, by their extraordinary powers of fecundity, have multiplied, and become legion. They are so minute, when first starting into motion, as not to be seen with the natural human vision, on the point of a cambric needle, therefore their eggs are little indeed. A microscopic demonstration which I made on the 24th of April last, with six achromatics and other glasses united, revealed in a cavity in the skin of the potato—space, size of the head of a shingle nail—a spawn or roe appearance, and I counted distinctly more than four hundred eggs in this little cavity. This, in some degree, answers "S. H. P," that "every effect must have its adequate cause," and "can so small a thing produce such effects as to cause thousands of bushels of potatoes to rot?" I reply, emphatically, that, these myriads upon myriads of insects, in their larva age, as found upon the roots of potatoes under ground, are capable of doing all this mischief. Week after week, they are sucking, poisoning and cutting off the sap, thus changing, gradually, the natural health of the sustaining element and life of the plant.

Carry out the acknowledged principle and statement of "S. H. P." which is a fact, that, from my own observations and experiments, I can corroborate,) which was fully admitted by the Prussian government in 1854, after their three years' experiments,) that, "this poison in the top (or vine)· descends to the tubers," and I show the cause that "produces this disease and decay." "S. H. P." speaks of animalculæ. His allusion to that part of zoology has no connection whatever with this "bug," the aphis. The former, in its zoological order belongs to infusoria; the latter to entomology; and they are as widely different from each other as fish and fowl. One, as he says, "floats in the water," the other inhabits the earth, and I know positively, feast in their larva age on the fresh sap of the roots of the potatoes and other plants, and in their pupa and imago ages move on their wings in the air. Animalculæ cannot be found upon, or in the potato. Atmospheric influence is not a predisposing or definite cause of this malady. The ocular demonstrations revealed by microscopic researches, clearly settles the question, that, myriads of entomological insects, by their ravages, and voracious appetites, in their larva age under ground, are the secret, and heretofore hidden, predisposing or definite cause of the potato blight and rot. This fact cannot be repelled.

June 30, 1859. THE FARMER BOY.

HIGH FARMING VS. INSECTS.

Speaking of the insects infesting the wheat crop in this and the old country, the *Mark Lane Express* thinks that the production of insects is greatly promoted by the defective system of agriculture in this country, remarking that "when the average produce of wheat in England was only two and a half quarters per acre, the ravages of insects were far more general and destructive than they are now that the average has risen to four quarters and a half. High farming is as destructive to vermin as to weeds, and it is rarely that the devastation committed on highly-cultivated land is very serious."

REMARKS.—We think other causes must be looked for, for the increase of insects, rather than the "defective system of agriculture." Increase follows supply in the insect world, as well as the vegetable. Feed the land well and it will produce abundant crops; so with insects. High farming produces an abundance of succulent and tender plants admirably adapted to insect wants, such as the leaves of beets, turnips, onions, cabbage, celery, tomato, parsnips, roses, egg-plant, &c. The leaves of our budded and grafted apple trees are far more tender and sweeter than those of apple trees in a natural condition, and probably more congenial to the tastes and habits of our predatory neighbors.

We are inclined to the opinion that on sterile tracts of land, one's squashes, cucumbers and melons would be much safer from the depredations of insects, than those in the midst of a highly-cultivated district. We kindly supply insects with the food they need, in the variety and richness of the plants we cultivate, so that they have a good time, and have little else to do but to multiply and replenish the earth with their kind.

Having brought the plants to a state of great perfection, it is the part of wisdom to devise the means of keeping off their invaders, so that a fair share shall reward the labor of the cultivator. This affords us an opportunity for the exercise of our patience and ingenuity, and as a general thing, is a blessing rather than a curse.

A TRAP FOR CATCHING SHEEP-KILLING DOGS.—Make a pen of fence rails, beginning with four, so as to have it square, and as you build it, draw in each rail as you would the sticks of a partridge trap, until your pen is of sufficient height, say five feet. In this way you will construct a pen that, when finished, will permit a dog to enter at the top at pleasure, but out of which he will find it difficult to escape, should he have the agility

of an antelope. All that you have to do to catch the dog that has killed your sheep, is to construct the trap, where a dead sheep is left, as directed, as soon as possible after an attack has been made on your flock, put a part or the whole of a sheep that has been killed, in it, and remove the balance to some other field. In a majority of cases, the rogue and murderer will return the succeeding night, or perhaps the next, and you will have the gratification next morning of finding him securely imprisoned.—*Southern Planter.*

For the New England Farmer.

CAUSE OF LOSS OF APPLE TREES.

DEAR SIR:—Will you allow me to say a word in answer to an article in your paper of the 21st of May, written by C. A. Hewins, West Roxbury? Mr. Hewins and yourself come to the conclusion that the underdraining of the land saved the apple trees. I believe the underdraining, if it proves anything, proves that the trees made a more vigorous growth where the land was not underdrained.

The occasion of the injury to the trees was, the land being too rich and the trees growing too fast. The fall of 1830 I suppose to be the warmest that ever was known in this country. Pumpkins and other vines were growing all October and into November, and we had no frost to stop the growth of anything until Wednesday or Thursday after Thanksgiving, and then winter set in, in earnest. I thought nothing of it until March, 1831.

John Lowd, who was then living, and engaged in cultivating trees, and a distinguished horticulturist, living in Roxbury, wrote an article in the *New England Farmer*, saying we shall have no more fruit for ten years to come. On reading the article I went into the nursery where I had peach, cherry and apple trees, and I believed, on examination, that it was true.

The result was, that trees that were growing fast were killed, thousands and thousands of them, while those that were making but little growth were not injured.

I was then in the nursery business. I took up two hundred handsome Baldwin apple trees, as fine trees as you will see, that were dead. I had sold to Joshua Seaver, of West Roxbury, I think, a lot of nice Baldwin trees, which he nursed finely, and every one was killed. It will, therefore, be seen that there is danger of making trees grow too fast. In the case before us the frost that came on the 10th of November did the injury.

The question then is, is there any remedy? In 1831 the injury was not half as serious as I expected at first. I went to many trees and found the bark started from the tree, but where it did not crack open to let in the air, the sap went up; but where the bark cracked open and let in the air, it was hindered, and did not get up. Trees have been dying from that day to this, as I now see trees almost dead that were injured that winter. I believe that had Mr. Hewins, if he saw it in January, taken a piece of old oil cloth and covered the crack, and wound it with rope yarn, so that the air would have been kept out, the trees would have lived. I draw this conclusion from what I saw in 1831.

Again, I have saved trees injured by the mice, by covering early with clay mortar, made soft so as to fit close to the tree, and then cover with earth to prevent the air from drying the tree. There are within forty rods of me three or four large trees capable of bearing four or five barrels each, that are spoiled and partly dead, and the remainder will die, by being driven too fast.

DANIEL LELAND.

East Holliston, June 14, 1859.

REMARKS.—Apple trees, as well as men, are quite often ruined by feeding them too fast. They become purient, gouty, burst, and die. We have often cautioned our readers against overfeeding fruit trees. The safe way with apple orchards is to manure highly, cultivate thoroughly, and take off a crop from the land every year, during the first fifteen years' growth of the trees. Such trees will not have the gout. We have seen an entire orchard of the finest trees, entirely ruined by high manuring and cultivation without cropping the land.

For the New England Farmer.

MOWING MACHINES.

MR. EDITOR:—I have noticed an article copied from the *Ploughman*, on farm work for June, in which the venerable editor of that paper says that it is but one-third of the labor of haying to cut the grass, and if the machine saves half the labor of cutting, it does not save but one-sixth of the whole labor. I think he has never had a good machine in practical operation on his own farm, or he would have mentioned another important item in hay-making, which is saved by the machine; that is, spreading the swaths and turning the grass once.

From my experience with a machine, I think that grass, where there are two tons to the acre, cut with a machine after the dew is partly off, will be as dry at two o'clock, P. M., as that which was cut with the scythe early in the morning, and the swaths spread at ten o'clock, and turned again at noon; here is a saving of labor just at the time when it is of the most value in the whole year.

He speaks of those who are bred on a farm, as delighting in mowing. I know there is something pleasing and exciting on a dewy morn in swinging the well-ground scythe through the well-grown timothy, and see the pollen rise at each stroke, and scatter its fragrance in all direction; but with me, the poetry is all gone, long before the field is mowed. Then comes the dull prose, and the sweating and sighing for some easier mode, and tired nature yields to the hot sun, and I like to hang my scythe where the farmer of Marshfield hung his, when in his boyhood his father told him to go and hang it to suit himself!

But the inquiry arises, can the small farmer afford to buy a machine? If to secure his hay, and do his other work upon the farm, he annually hires fifteen days' work extra in July, which will cost him in this county twenty-five dollars, by using the machine he can do his haying as well,

and his other work better than he would do with fifteen days' extra labor, is it not better for him to pay the interest of what the machine costs, and work his horse, than to pay out so much money annually for extra labor in haying time, which, my experience has taught me, is the poorest of all help if told to do anything but work at haying? He says that it is but one-third of the labor to cut the hay; this may be true, but on many farms it is difficult to get this third done; some have not the strength, and more have not skill enough to do it advantageously. He says, "good mowers will cut down two acres per day, and be pleased with the job." It is easy to tell what we can do at mowing, and what we have done when we were young, and what a man ought to do, but the most practical question is, how much do hired men mow, per day? I think the farmers in this county pay for more days' work at mowing than they mow acres.

Danvers, June 15, 1859. Wm. R. Putnam.

Remarks.—It is our opinion, that taking low land and high, thick grass and thin, the average ground gone over by the farmers of Essex county, or any other county in the State, does not exceed one acre per day. We never have, and never expect to hire men to mow, who will make a greater average than this, taking all kinds of mowing into account.

For the New England Farmer.

TRANSPLANTING WHITE PINES AND HEMLOCKS.

Mr. Editor:—I have received letters from many gentlemen in your vicinity requesting me to inform them, or publish in your paper, my method of transplanting white pines, hemlock and other evergreen trees. After having tried and failed to a great extent in all other ways, I determined to try winter transplanting. I proceed as follows, viz:—Late in the fall of the year I drive a stake where I wish the tree to stand, make a circle around it five feet in diameter, take off the sod and lay it out of the way and cover the hole well over with refuse hay or straw to prevent freezing; it might perhaps be better to leave the sod on, as the grass affords much protection against frost. I then select such a tree as I wish to transplant, preferring those about 10 or 12 feet high, limbing close to the ground and thick in foliage, make a circle about it four feet in diameter, dig a trench outside of it the width of the blade of the spade, and about a foot deep, cutting down square and smoothly, fill the trench with leaves, hay or straw, leave until the ground is frozen five or six inches deep, (if any snow falls clear it off,) then clear out the trench. Apply a stout lever, and raise the ball of earth sufficiently to run under a couple of short planks, one end of which rest on a stone drag; apply the lever on the opposite side to free the ball there, pass a chain around it, and with the team slide it carefully on the drag, and unload in the same way. Be careful that no spaces are left under the tree; make a good pit and fill in the earth around the edges. If the situation is very much exposed, three or four large stones may be placed about the tree, or what is still better, increase the size of the ball, and not only will the same object be effected, but the tree will suffer less by the removal.

In all operations of this kind it is important that they should be carefully and well done, and if possible, the owner should give his personal attention to the subject; having done so, I venture to assert that not one tree in fifty will fail to grow the next year.

The size of the hemlock, in my communication published in your paper of June 11th, is 9¼ inches in *diameter* instead of *circumference*, and I find by measurement, that it is 30½ feet high; the frozen ball in this instance was 9 feet across.

Samuel Raymond.

North Andover, Mass., June 20, 1859.

For the New England Farmer.

APPLE ORCHARDS.

Thanks to S. P. Baker for speaking out on this subject, in the *Farmer* of the 11th inst. I have no doubt but his experience and observation will substantiate all he says. At any rate common sense, (which has become quite too uncommon a quality in our days,) is on his side. Common observation, also, will sustain him in the main declaration, that the seeds should be planted where the trees are to remain, to make healthy, long-lived trees. Transplanting and root pruning may help forward an early productiveness and shorten the life of the tree, which, in order to have durability, provides itself with just so many roots as it needs for its special benefit.

Many of the best and healthiest specimens of modern apple trees may be found in those that have sprung up from accidental planting by some wall, or in the corners of fences by the wayside. They sprung up by chance, and have grown by neglect, at least by letting alone. Their tap root has never been taken off. Their side roots have never been shortened. There they stand, firm as young oaks; if disease attacks them they have a constitution to baffle with it. The borer seldom takes quarters in them; worms may weave their web there, but these are easily destroyed. In old fields we see the same facts illustrated. How many thousand trees there may be in Massachusetts, scattered in a higglety pigglety way over meadows, we know not, but there are probably many more than there are in young orchards. We sometimes see them slow growing, shrubby things, and well they may be, for they stand in places where ordinary crops give labor but a poor remuneration—in exhausted, shallow soils, where they cannot grow, though they live on, and show a good disposition to do so. They are the offspring of neglect. Cattle browse there, still they live. The borer sometimes attacks them, but very seldom, for if it preyed upon them as it does on cultivated trees, thousands of them would long ago have been clean gone forever. I have looked upon the teaching of nature and have received instruction, and the deductions I make correspond with the suggestions of the man who has rounded his fourscore years. If we would have healthy trees, and leave them for posterity, we must plant the seed where the tree is to remain.

To raise trees from seed the ground should be well prepared, the soil made deep and well pulverized, thoroughly drained, and put and kept in as good condition as though corn, wheat or any other paying crop was put upon it. The seeds should then be selected from fair fruit, for I am confident that for grafting purposes a good, healthy stock is desirable. I know not why diseases and other objectionable qualities may not be hereditary in trees as well as animals. Select, then, the plumpest seeds from the best fruit for planting, and if half a dozen are planted where you wish a tree, no harm if they all start. Let them grow one season, and then select the most promising for the future tree, (removing all others,) and bud or graft it with the desired variety as early as may be. I have no doubt but an orchard may be raised in this way as cheap and of a great deal better, longer lived trees, than by any other course. It may require more care for a year or two than is necessary for trees started in the nursery, but in the end I firmly believe it will be better.

A tree, like an animal, is an organic being, and a perfect tree, like a perfect animal, has all its parts furnished by a provision of nature. Take away any of those parts, and you deprive nature of its perfection. Who would think of giving a drawing of a horse divested of its tail, mane or ears, or of a bird with its wings clipped, or of a man with either hand divested of a finger, or minus an eye? In such a case, the drawing would represent the object claimed, in perfection, but in a *mutilated* form, divested of a part essential to its perfection as the object represented, and necessary to its growth and healthfulness. We have no members we would willingly dispense with, none but what contribute to our success. They are all provided by the God of Nature for useful purposes. So with a tree; it has its parts and proportions adapted to its circumstances.

Of the thousands of apple trees that have been transplanted for the last dozen years, the number now living is discouragingly small, and those actually promising to make good and durable trees is still less. In most instances, these failures have been attributed to want of care in the cultivators, while the unfortunate purchasers have laid the blame to the localities from which their trees were originated. In some instances, probably, the failures have been justly given to right causes. But there are, no doubt, other and more tangible reasons operating collaterally with these. I have heard of a practice among some nursery men of dividing roots to an indefinite extent proportioned by the quantity of them, and grafting and making a tree of each of the parts. Of course, these would make but part of a tree and a sickly, short-lived part at that, for a piece of a root can never make a full root to sustain and nourish the plant. Another cause has probably been that very many trees have been sold by travelling agents, whose trees, to say nothing of their quality when standing in the nursery, are often, judging from the scantiness of root, dug with great haste and little care, and hurried off to their destination. If they fail, where is the responsibility? Not in the nurseryman. He fills the orders sent in by Mr. A. for so many trees. He has them of every quality, and like every one else, is anxious to dispose of his wares. There are some poor trees, which he is not willing to lose—they must go with the rest. He does not know who will have them, so he is not responsible. Mr. A. has ransacked the country to sell trees, and agrees to furnish Mr. B., Mr. C., and so on, so many each. Each purchaser must sign the contract, but the vender of wares is left on his word to bring such a number of trees, the very best, of course. What arrangement he makes with the nurseryman I know not, but I have seen more than one sorry looking, almost rootless bundle of trees, brought on, and the purchaser must take them. It is not strange that they die.

When trees are purchased, it is better for the buyer to deal direct with the nurseryman. It will save the percentage that the middle man works for, and as we may well suppose, secure better trees; for what nurseryman will fill an order for reliable trees with an inferior article? No one who has any regard for reputation. I have sent orders to nurserymen direct, with cash accompanying, three hundred miles, and were as well accommodated as though I had been on the ground and made my selection and taken up the trees myself. I should not hesitate to do the same again, but I should hesitate, twice at least, before I purchased of a travelling vender, unless he gave me a warrantee, signed and sealed, that the tree should stand on the full roots of a seedling stock, carefully taken up and delivered in a good condition. WILLIAM BACON.

Richmond, Mass., June 20, 1859.

For the New England Farmer.

WHITE SPECKS IN BUTTER.

MR. EDITOR:—Your correspondent "T.," asks, "What makes the white specks in butter?" I answer, they are occasioned by the milk being "set" where there is a current of air, as from an open window, or by the milk-room being too warm, so that the surface of the cream in the pans before skimming becomes dry, and in the process of churning does not mingle with the rest of the cream, but remains in the butter and butter-milk in the form of specks.

In your "Remarks" appended to "T.'s" inquiry, you say that the white streaks in butter may be occasioned by some of the cream being more recently taken off, and not come so readily as that does that has been taken off longer. My theory is, that they are caused by the salt being imperfectly worked in at the time of salting, the white streaks are not so salt as the rest of the butter.

Since writing the above, I have read the communication of Henry Holmes. He says, "if you scrape what cream there is on the lid of the churn into the cream-pot, you will not be troubled with those white specks." The cream on the lid, or in the corners of the churn has nothing to do with the specks or streaks in butter, and had Mr. Holmes spent the last five years in person, churning, working, and putting down butter for market, or so much of the time as would have been requisite to taking care of a good dairy, instead of "manufacturing and selling churns," he would have learned that fact. H. BLAKE.

Hardwick, Vt., June, 1859.

For the New England Farmer.

TRIAL OF MOWING MACHINES.

Mr. Editor:—*Dear Sir*,—I notice in your issue of June 25 an article on mowing machines, signed "Truth and Justice," in which the writer labors to convince the public that Ketchum's improved mower is the best machine in the market, and that it proved itself such at the trial of mowers in Boylston some ten days since. There are several statements made in that article which are erroneous. The first which I will notice, is, that "the work of the Manny mower lacked that evenness of cut which characterized the work of the Ketchum;" the opposite of this was evident to most who examined the work of the different machines impartially, especially in that of the Connecticut machine, whose swath, in many parts, was a complete wave. It was claimed for the Ketchum that it would cut closer than the Manny, that it would not clog, would cut lodged grass better, would start easier in heavy grass, and had less side draft than the Manny machine. These, I think, were refuted by the working of the Manny machine. "Truth and Justice" claims as a reason for the fatigued appearance of the horse which drew the Ketchum, (which, by the way, is from 200 to 300 lbs. heavier, and I should say quite a number of years younger than the Manny horse,) that he had been worked all the forenoon at Worcester, then driven ten miles and put on the machine. Admit this—but was that the case on another occasion when the writer saw the same horse on the common in Worcester, drawing the same machine, and exhibiting even greater fatigue than on the occasion in question?

The operation of the two-horse machines was quite as opposite in its results to what "Truth and Justice" claims, as was the case with the one-horse mowers. To the Ketchum machine, with a six-foot bar, were attached two powerful horses driven by one of the best operators of mowers in the State, and with this strong team it was with difficulty that the horses could draw the machine, and at the same time be kept clear of the standing grass, so great was the direct and side draft, the pole of the machine swaying against the off horse nearly the whole distance cut; this fact, perhaps, was not noticed by your disinterested (?) correspondent, "Truth and Justice," but it was noticed and spoken of, not only by the writer, but by many others in his vicinity, among them one or two of the most experienced operators of mowing machines in the country.

The fact that both Manny machines exhibited were sold on the ground, and that five or six have been sold since to parties who were present at this trial, proves that all the farmers there assembled did not form the same opinion as to the merits of the two machines, which "Truth and Justice" asserts that they did.

Since the above trial there have been trials at Georgetown, Lowell and Sutton, in all of which the Manny has proved itself to be the most reliable and practicable machine. At Sutton a trial came off on Friday last, although the weather was such that according to previous arrangement it should not have taken place. The machine was put into wet, heavy grass, and the Ketchum proved an entire failure, clogging and slipping over the grass, cutting it anywhere but close to the ground. The Manny did its work well, cutting the wet grass closely and evenly We are straining every nerve to supply our customers as fast as their orders are sent in, and at this time our supply of one-horse machines is exhausted, except what we are able to turn out from day to day.

With these statements of the truth of the matter I leave the public to judge which is the best machine, and how much consistency there is in your correspondent subscribing himself "Truth and Justice." Alzirus Brown.

Worcester, June 27, 1859.

Remarks.—We were somewhat reluctant to publish the article in our last signed "Truth and Justice," lest it might open a controversy not in accordance with the design of our paper. Knowing the writer however, not only to be what is called a fair man, but a man of the strictest integrity, a man of sound judgment, and of acknowledged reputatation wherever known, and listening to his argument that the people ought to learn the result of such a trial, we admitted the article.

For the New England Farmer

KICKING COWS AND ORCHARDS.

Mr. Editor:—In your issue of last week I notice two methods recommended to prevent a cow from kicking. Of course, it is not Mr. Beecher's brindle, "All Saint." "A Belmont Farmer" says: "Take a rope long enough to go round the cow, commencing at her forward legs, and tie it over her shoulders. Now take a stick and twist the rope tolerably tight, which will prevent her from using her legs." Query. Is the rope to surround the cow longitudinally or latitudinally? If the former, we don't see how it can be tied over her shoulders. If the latter, i. e., as a girt is put on a horse, we don't see how it can prevent the use of her hind legs.

We once had an awfully bad kicking cow. She kicked so badly that it really made us mad at her; and we foolishly, I allow, undertook to lick it out of her; but it was of no use; the more we licked, the more she kicked. O, we had a terrible time of it, at least the cow did. You can lick or choke a bad habit out of a horse, but out of a cow never; they don't know enough. But to the method to prevent kicking.

Take a rope, say a yard long, and with a single knot tie it in its centre, just above the hoof of the rear forward foot. Pull upon the ends of the rope a little, and she will raise her foot. Hold the foot up and tie the ends of the rope around the leg above the knee, which keeps the foot up, and she has to stand on three feet. If she flounders a little at first, never mind it; she will come all right soon. After doing this a few times, she will raise her foot as easily as a horse to be shod, and you can have simply a noose to slip over the knee as she doubles it up, and effectually prevent all kicking.

I have a few acres of apple orchard now, from seven to ten years old, and for a few years, trimmed it in the spring; as some writers on

trimming advise to trim at any season when you see a limb that needs cutting off. By so doing I found my trees to bleed badly, for two or three years, and to turn the bark black. I now trim not till after the trees get well leaved out; say the last of June or later, and they do not bleed. Is that right? CIT.

Lowell, Mass., June 20, 1859.

REMARKS.—Certainly. If you must trim, do it when it will cause the least injury; and that is when the sap has passed up and is elaborated into the substance that increases the size of the tree. From the middle of June to the middle of July is a good time. It may also be safely done when the leaves have fallen in autumn, and the tree is in a comparative state of rest. Always cover the wounds with shellac dissolved in alcohol.

EXTRACTS AND REPLIES.

SEASON AND CROPS IN WESTERN MASSACHUSETTS.

Our season has some beautiful and some discouraging features. I never knew so severe a winter on fruit trees as the last—not from excessive low temperature, but severe and rapid changes. How can trees survive, when, as in January, the mercury falls 50° in twenty-four hours? Peaches may be considered used up; quinces have suffered badly; the last year's growth of the apple was in many instances killed, and some trees that just survived are very late in showing verdure, I have seen apple blossoms on such trees June 15. The pear was decidedly the hardiest tree, at any rate it suffered least.

We have had three frosts in June, neither of which, from my locality, has injured me, while a mile distant corn is cut down, potato tops nipped, pompions and beans killed. We have frequent and heavy rains, giving grass and grains a fine appearance. W. BACON.

Richmond, Mass., June, 1859.

—

THE SEASON IN NEW HAMPSHIRE.

The first half of the present month has been colder, here, according to the testimony of elderly residents, than the corresponding season of any previous year since 1816. From the first to the twelfth day of the month there were five frosts, doing great damage to corn and other tender field crops and to gardens. Much of the corn in low grounds is entirely killed. Farmers, in some instances, have planted again with an early kind; and some have plowed up their fields. In some particular localities and in some fields the corn has escaped, when in other fields but a few rods distant, and of a less northern exposure, it has been entirely destroyed. My attention was called to-day to a field which had been planted with corn, all at the same time, in part of which the corn had been almost entirely destroyed, while that in the other part appeared to have been but little affected. The field was level, and the line of division between the part that was destroyed and that which was spared was most distinctly marked and straight for several rods. What is further remarkable in this case, is, that the part of the field in which the corn escaped was fully exposed on the north side, while the other part was sheltered by buildings. I should like to know how these facts can be accounted for.

R. M. FULLER.

Lempster, N. H., June 16, 1859.

—

THE CURCULIO.

Experimental knowledge is the most reliable knowledge in the world. Mr. WESTON, of Reading, told me that he had succeeded in ridding his orchard of the curculio by turning his swine into it in June, accompanied by his fowls. The swine ate all the diseased apples fallen from the trees, and the fowls acted as gleaners, following in the rear of the rooting pigs and devouring all the worms and other small animals which escaped the hogs in their rooting operations. He kept his hogs and fowls in his orchard till September, or till apples were ripe. He had an idea that hogs alone were not sufficient to spy out all the worms, and therefore their extermination required the assistance of the fowls.

SILAS BROWN.

North Wilmington, June, 1859.

—

WORMS IN HORSES.

I wish to inquire of you, through your paper, what the symptoms are of worms in horses? Also, a remedy for the same. H. D.

Lisbon, N. H., June 14, 1859.

REMARKS.—Symptoms of worms are a tight skin and rough coat; the horse will sometimes stand with a sort of vacant look, and at others seek to rub the hind parts against the boards of the stall. Other symptoms are an irritation about the fundament, and small white lines of mucus around the anus. You will not be likely to mistake this symptom. An easy, and what we have always found a certain remedy, is to take clean, fine wood ashes, mix a gill of it with wet oats or cut feed, and give the horse every other day till these symptoms disappear.

—

CROPS AND WEATHER IN VERMONT.

We have had pretty sharp frosts this month, of the consequences you can judge—have had cool weather for nearly two months; our grass was very much injured by the severe cold last winter; it has been dry until about two weeks ago, and now we are having a wet time. Crops are looking middling well. The greater part of our corn had not shot out of the ground when the frosts came. We have few sheep compared with what we had twenty-five years ago. I think the farmers, generally, mean to get 45 to 50 cts. for their wool. We have more old corn on hand than is usual at this season of the year.

W. F. GOODRICH.

Middlebury, Vt., June 18, 1859.

—

PRESERVING CANS.

Our correspondent at *West Henniker, N. H.*, who inquires about preserving cans, may find

plenty of tin ones at Haynes & Foss's, Blackstone Street, Boston. If he do not like tin, take any glass jars, put the fruit in hot, or exhaust the air in some other way, then tie over a thin piece of India rubber or rubber cloth. There are various kinds of cans in the market.

—

WEATHER IN VERMONT.

The prospects of the farmers here are gloomy enough. The season, thus far, has been very dry and cold, with frequent frosts. Last Friday quite rainy, and to-day also. Much corn has been killed with frosts, and worms are injuring corn and other grains. M. S.

Cambridge, Vt., June 13, 1859.

—

COW LEAKS HER MILK.

Can you, or any of the readers of the *Farmer*, tell what will stop a cow from leaking her milk? I have tried liquid cuticle, and a neighbor has tried white oak bark boiled down and alum, without stopping the leak. E. H. W.

Charlotte, Vt., June, 1859.

—

CURE FOR GARGETY COWS.

I have found horse radish, cut and fed in potatoes the same as garget root, a good remedy for gargety cows. E. P. CHASE.

Deerfield, N. H., June 18, 1859.

LETTERS FROM MAINE---No. 2.

In my last, I referred to the disastrous effects of the last winter upon young Baldwin trees, in Maine; and the facts stated seemed to me to prove that no reliance can be placed upon the success of the culture of the Baldwin, where there is a liability of the occasional sinking of the thermometer to the point of congealation of the mercury.

With us, whenever the mercury has approached within ten degrees of the point of congealation, almost all Baldwin trees which were grafted near the ground, or which were subjected to high culture, when grafted higher, have been entirely destroyed, or received irreparable injury.

Next to the Baldwin, the Tolman Sweeting suffers the most severely, and the Rhode Island Greening is unsafe with the thermometer thirty degrees below zero. The Spitzenburg is not safe in Maine. When severe cold may not kill the tree, it has an injurious effect upon the fruit. The New York Russet is nearly worthless with us. Too much dependence has been placed upon varieties of the apple which have proved valuable in the latitude of New York, while too little attention has been bestowed upon varieties originating in higher northern latitudes. Much has been said about the introduction of trees raised in New York nurseries into Maine, and it is now generally believed that trees from the South cannot be made to thrive in our latitude, but with me the variety has had more to do with the hardiness of the tree than the location in which it was raised. While all investments in varieties of the Baldwin type brought from the Rochester nurseries have proved total loss, the Pomegris brought from the same nurseries, seems to be proof against our coldest winters.

The Black Oxford, a native of Maine, a slow grower, a great bearer, and an excellent apple, received not the least injury from the winter, when the mercury freezes.

The past winter has proved fatal to the Black Heart Cherry when growing on its own root, but the heart cherries, when grafted on the wild or bird cherry stock, appear to be proof against the effects of frost.

Almost all the damson trees within the reach of my observation have been killed, and so have the Lombard plum trees, but the Imperial Gage proves hardy enough for our climate.

SANDY RIVER.

For the New England Farmer.

MOWING MACHINES.

Much disappointment was manifested at the late fair in Georgetown, at the imperfect exhibition of the power of these implements. I confess to have shared in this disappointment, Not that there was not a sufficiency of good machines on the ground, but at the combination of circumstances that tended to prevent their operating advantageously. First, there was no order in this movement, each one going into the field just when and where he pleased, and continuing more or less as he pleased, therefore affording no opportunity to compare the operations of the machines with each other. Second, the imperfect growth of the grass, it not being fit to cut. Third, the uncontrollable movements of the multitude through the grass in all directions. For these and other reasons, the committee acted wisely in not expressing any opinion of the implements presented. I was quite surprised not to find on the field our old favorite implement—the *Allen machine.* What has this done to be placed *hors du combat?* I had supposed the principles involved in the structure of all these machines, to be so simple and so common, that any one might use them as they pleased. This carrying *patent privileges* to an extreme, is not promotive of public good. Give us honest effort and sound common sense in all these movements. ESSEX.

For the New England Farmer.

ONION MAGGOT AND GUANO.

MR. EDITOR:—In reply to the inquiry of Mr. Emerson in your paper of June 25, "Has Mr. Proctor tried the guano, and did it fail him?" I answer, that I have not myself tried it; but my neighbors have tried it, viz., Messrs. Buxton, Wilson, Bushby, Bodge, Huntington, and others, all of them extensive cultivators; and each and all of them have assured me, since the publication by Mr. Emerson of his experience, that they have no confidence whatever in the curative qualities of guano. I have the same assurance from Mr. H. Ware, of Marblehead, who in the season of 1858 raised and sold *five thousand bushels* of onions; and who now has twelve acres planted with onions, from which he hopes to obtain *six hundred bushels* to the acre — provided their growth shall not be interrupted by the maggot or rust. J. W. PROCTOR.

South Danvers, June 25, 1859.

For the New England Farmer.

HEAD OR HUB.

Every system which is self-sustaining is justly to be compared to a circle and a wheel. Such, if a system of farming, has its *hub*, or item of prime and indispensable importance. Men have their systems of farming which are successful, as systems of money-making; which ought not to be called self-sustaining, because the farmer's money is obtained by the exhaustion of the land. Such systems have a *head*—some leading and governing idea—but they have no *hub*.

He who makes himself rich by making the land poor, robs the next generation of the means of subsisting comfortably, by honorable industry, as farmers. Such a man is a great sinner against God who gave the earth, or soil, for a perpetual blessing to the cultivator; he heaps heavy burdens upon unborn generations; he is a scourge and curse upon the land, in his day, and leaves the blight of barrenness to those who may be born after he dies. His march through time is like that of the warrior. He makes money, and this is all his aim. Men give him the glory which they give a conqueror; because he has gotten to himself riches. But desolation fills his track.

God gave the soil to be fruitful, and to grow, more and more fruitful by continued culture, only enjoying its Sabbaths. Man must ever be dependent upon the fruitfulness of the soil for the means of a comfortable subsistence. Fishing may feed a few, hunting may abate some hunger, but the farm must feed the multitude.

How can the farm be made to produce more and more for home consumption, and at the same time more and more for foreign market? He who can strike that idea, in a true answer, will hit the hub of the wheel. He will know upon what part of his system everything else depends, and around which everything else revolves.

The man who only thinks to increase the contributions for market, without a proportional increase of consumpion on the farm, will be found to swindle the soil.

Upon some farms a few cows will be the hub of the wheel in a self-sustaining and an improving system of farming. Cows produce calves; calves grow into cattle; cows produce milk; milk produces pork; milk produces butter; milk makes cheese. A prime article for the life and prosperity of man, is milk.

To a good, grass-growing farm, a cow is justly entitled to the crown as queen of the realm; she has proved, to many a man, the mother of money. Sometimes she has proved almost the mother of men; she contributes to the compost heap; she nourishes the calf that grows and contributes to the compost, also; she feeds the pig with her milk, while he grows at less cost, and adds by work and contribution to the compost heap. Thus does Mully make a threefold contribution to the compost heap; in herself, through her offspring, and through the thriving grunter in the pen. The size of the manure heap will mostly settle what is in future to happen on the farm, by way of corn-crops, clover-cuttings, handsome cattle, &c. She contributes a calf—the father of an ox or cow—too important a friend of the farm to be bailed to the butcher without hesitation. She contributes more for the growth of piggy than could be gathered from a half-acre of poor corn. She giver a large portion of her value yearly in golden butter, or in nourishing cheese.

Now, it is a matter of some moment to the farmer, that the cows he keeps should be good ones. Such will cost no more care, no more keeping; and yet they will be worth more, and they will pay for more.

See, friendly farmer, if the hub of your wheel is sound. Your carriage will "go to smash," if it is not.

There is, as I believe, some just and proper system to be pursued on every peculiarity of soil, which shall at the same time prove a blessing to the soil and a source of profit to him who cultivates it. I do not believe that even in these material matters the governing law of a true system can be such that labor and life tend to destruction.

I have already spun this thread so long that I must cut it short at once. C.

Lee, N. H., 1859.

For the New England Farmer.

AGRICULTURAL MARKET FAIRS.

BY WILSON FLAGG.

The agriculture of a State cannot be prosperous or productive in the highest degree, unless every district has an easy and ready access to a good market. It is the expected rule of one's prudence that urges him to raise more than he wants for his own consumption; and the hope of making his business profitable, stimulates him to acquire a knowledge of it, and to learn the best methods of rendering his lands productive. Good markets, therefore, exert more influence in the education of the farmer than is generally attributed to them. While their labor in the field teaches them experimentally how every process is to be performed, their observation at the market encourages them to increase their efforts, and to attempt new things. Let it be demonstrated to any young farmer of sober habits and intelligent mind, who occupies a farm which is badly situated for the sale of its produce, and who has neglected his business because he saw no chance of making it profitable; let it be made evident to him that in a new market lately opened, he could find a good sale for every thing his farm would produce, and he immediately becomes enterprising and industrious. Inspired with the hope of increasing his wealth, he feels a new interest in his occupation, and immediately sets his mind at work to learn all the valuable improvements in farming. He overleaps his prejudices in the ardor of his pursuit of fortune. He becomes more studious as well as more active, and takes a sudden start, like a healthy young tree, that has been transplanted from a dry and barren declivity to a deep soil and an open situation.

Whenever a body of farmers are unsupplied with good markets, as we observe in certain remote and isolated districts, they commonly unite their employment with some mechanical art; and under such circumstances the state of agriculture is low. The intelligent members of their community are better informed upon other subjects than upon agriculture, which offers them no opportunities of improving their condition. If the

construction of a rail-road through one of these remote districts suddenly creates a market for agricultural produce, or renders a distant market accessible, an immediate impulse is given to the agriculture of the place. The present inhabitants are stimulated to greater activity, and other individuals of superior skill and enterprise are induced to join them in the occupation of farming. Instances of agricultural improvement arising from this cause have been observed by all.

We will now suppose another example, in which the market was created, not by a change in the system of public travelling, not by what might be called an accident, but by a premeditated scheme, originating with the inhabitants of one of these isolated districts. The farmers of this section may be supposed capable of producing on their lands the value of half a million more than they now produce. Outside of it, the people of other occupations buy the products of distant parts, from which they can easily obtain them through the great throroughfares. The farmers of the district above mentioned, having become aware of these facts, and led on by some capable individual, resolve to establish, outside of the district, a depot for all their productions, and they agree to send them to this place which is very accessible to the whole neighboring country, whose inhabitants are mostly non-agricultural. The consequence of such an arrangement, if the management of the business and the sales are conducted by an honest and capable body of agents, is an immediate change in the condition of the people. The inhabitants of the adjoining villages purchase many of their commodities at this depot, in preference to their former method of supplying their wants, because a near market, other things being equal, is always preferred to a distant one.

The farmers being urged, thereby, to raise more produce, are able to live in better style, to enjoy superior comforts, and gradually acquire additional wants. The manufacturers who buy their products find a ready sale for their own articles, for the children of the farmers who formerly went bare-footed now wear shoes; both men and women use better clothing, better household furniture and improved agricultural implements; they consume more luxuries, both in the parlor and the kitchen, at the table and the toilet. They become more liberal and ambitious, and both willing and able to support other occupations. Every branch of business receives a healthy and extraordinary impetus, by the voluntary establishment of this market. Yet this was the effect of a forced arrangement—of a combination of the inhabitants of a dull place, to resuscitate it, and to improve their circumstances by supplying a want, which was not supplied by the accidents of commerce. By means of it, they are brought into commercial intercourse with the rest of the world, and the intelligence of the farmers improves as rapidly as their prosperity.

The prosperity of agriculture must be dependent on the extent of the non-agricultural population that needs to be supplied with its products. But the farmers of a particular district, while surrounded by a large non-agricultural community, may still be unprosperous, if the wants of the latter are supplied from other sources. When, therefore, it is proposed to create new markets for the farmer, one of two things must be accomplished. Either the non-agricultural population must be increased, or the present number must be induced to purchase of the farmers in their vicinity. The first is often done by the establishment of manufactories, and by opening new avenues of trade. The second object may be accomplished to a limited extent, by rendering the medium of communication between these two classes more easy and practicable, and by demonstrating to each the methods by which they could advantageously trade with one another. Each of these ends may be promoted by the establishment of markets and depots for agricultural products, and by making the farmers acquainted with the extent of their ability to compete with distant producers, who have formerly supplied the wants of the people. This knowledge they would soon obtain by observation and experience at the markets.

Markets may be regarded as of two sorts: first, those of a general nature to supply the miscellaneous wants of commerce; second, those established to accommodate the members of a particular branch of business. All great cities, towns and manufacturing villages afford markets of the first description. Markets of the second sort are commonly the result of agreement between the parties to be accommodated, like the trade sales among publishers and book-sellers. Such, also, are many of the agricultural fairs established in all parts of Europe, and which are attended by the farmers and peasantry, to save the trouble and expense of going to a general market to buy and sell. They are instituted chiefly for the benefit and accommodation of agricultural producers.

Agricultural fairs in this country are premium shows; they are not markets like those of Europe. They have not been without their utility, but they are attended with great expense; and though this expense is contributed for the improvement of agriculture, yet, if the same ends could be accomplished by another system, in which this expense would be avoided, so much money would remain to be usefully appropriated in other ways. Our annual shows are used to some extent as markets; but they do not bear this character, and no man attends them for the mere purpose of buying and selling. Regular agricultural markets are established throughout the kingdom of Great Britain. Some of these are monthly, others are semi-monthly or weekly. They are held in the most convenient places, and many of them were founded by the exertions of some wealthy land-proprietor, for the purpose of raising the value of his estates. In some places, it has been the landlord's practice to give a dinner to all purchasers who attended the market, and to afford all possible facilities both to buyers and sellers. So much expense would not be lavished, without reasonable expectation, at no distant period, of profitable returns. In these cases, the landlord undertakes, at his own expense, the work which, in one of our supposed examples, the farmers accomplished by associations for their mutual benefit. At different times, there seems to have been considerable competition among landlords in relation to these enterprises. Their efforts, in connection with other circumstances, have ended in the general establishment

of agricultural fairs in the British Islands.—It cannot reasonably be doubted that these local institutions have exerted the best influence on British agriculture. They have brought markets for the farmer up to his very doors; and they are so general and so frequent, that one seldom fails to dispose of his produce or his stock. If he does not sell his products to-day, at the market in which he has offered them, he immediately adjourns to the next fair, that happens tomorrow, in some adjacent town. It is unnecessary to enumerate any of these fairs; but we would remark that they are, for the most part, severally used for the sale of products or stock, of one description alone. There are fairs respectively for horses, for oxen, for cows, and for particular breeds of each of these animals. There are lamb-fairs, fairs for rams and for ewes, and for lambing ewes. At some of the principal fairs in Scotland, the number of sheep exhibited is from 70,000 to 80,000, and the number of cattle is from 20,000 to 30,000. Some of these are of a description called *character* markets, at which no sheep or wool is shown. The quality of the sheep stock, and the nature of the clip of wool, from each farm, are known by experience or reputation to the purchaser, as flour is known, in this country, by the brand of the manufacturer.

Such markets, were they to become general, would serve, in great measure, to diminish the evil of fluctuation in prices, which is caused by unsteadiness either in the demand or in the circulation of goods. The first cannot be controlled; the last may be checked, in part, by increasing and multiplying the facilities for internal commerce. There is often a demand for corn in the Eastern States, when there is a great surplus at the West. The railroad communications are not sufficient to preserve an undeviating regularity in the exchange of commodities between these two sections of the country. Were it as easy in Massachusetts to obtain corn from Illinois or Tennessee as from New York city, the fluctuation in its prices would be chiefly caused by an increase or diminution, either in the production or the demand, as they could not proceed from the imperfect character of the conveyances. The same reasoning applies to the commerce of more limited districts or sections. The commercial intercourse of the farmers of Massachusetts, with its non-agricultural population, may be so imperfectly systematized, as to render it difficult to sell half the quantity of produce which might be readily sold under a good system of commercial opportunities.

Our farmers do not raise many products for a distant market, because the State contains a large population which is not agricultural, whose wants are more than our domestic agriculture could supply. Hence their principal trade is carried on with the inhabitants of their own State, and domestic markets are almost the only ones that are available to them. It is, therefore, highly important that these should be sufficient in number, that they should be widely distributed, and placed under wise and efficient regulations. They might, thenceforth, become the most valuable aids to our domestic agriculture, and stimulants to its activity. The increased sales of every commodity always tend to increase the efficiency of the labor employed in producing it; and the necessity for greater efficiency tends to improve the skill and awaken the enterprise enlisted in the business. Our farmers will improve in skill and intelligence, not as we multiply the direct means for their instruction, but rather as we increase their facilities for bringing their products to a good market.

It was recommended, therefore, some time since, by R. S. Fay, Esq., to establish periodical Market Fairs in some important town in each county of the State, for the improvement of commercial intercourse between the agricultural and the non-agricultural classes of our inhabitants. These fairs were proposed to be a sort of Farmers' *Exchanges*, where they would be accommodated, not only in buying and selling, but in conversing with their fellow-citizens upon all topics of interest. It is reasonable to conclude that one or two days in a season, devoted to these occasions, would be of more value than one or two days' labor to the general agricultural interest, as well as to the individual interest of those who attended them. They would greatly relieve the monotony of the farmer's life, by providing periodical holidays, if they may be so called, where business might, to a certain extent, be joined with recreation; and while the parties were making bargains for their mutual benefit, they would learn from each other the state of the crops, the demands of the markets, the prospects of the season, and the means of improving their farms.

In accordance with the views and recommendations of Mr. Fay, the Secretary of the Massachusetts Society for Promoting Agriculture, this association offered a prize of $150 for the best essay on this subject. Allen W. Dodge, Esq., was the successful competitor. In conformity with the plan recommended in the essay, and to carry out the original design of Mr. Fay, the Essex County Agricultural Society have set the first example to the public, by their late Market Fair in Danvers. This is said to have been very successful, and the society have voted to hold the next fair in North Andover, on the third Tuesday in May; and it is their intention to hold one annually in the same place. It is to be hoped that the farmers will see the tendency of these institutions to promote their general and individual interest, and that they will contribute their endeavors to assist Mr. Fay in carrying into execution his patriotic enterprise, the mere preliminaries for which have required no ordinary amount of energy and ability.

For the New England Farmer.

THE TURNIP CROP.

MR. EDITOR:—Can it be that the turnip is so worthless as Mr. B. of W., and Mr. C. of P., in your last issue, represent? I have long considered it an exhausting crop, as compared with many other vegetable products, but not so bad as they represent.

If my recollection is right, the great Mr. Webster, on his return from England, spoke of the culture of the turnip as engrossing a large share of the attention of English farmers. I am quite sure their books on culture speak of the turnip, as the principal crop for the feed of their flocks of sheep, permitting them to gnaw them in th

field, without being harvested. Is their soil so different from ours, that this crop will do well there, and not at all well with us? I have known 1600 bushels of English turnips to be gathered from an acre, estimated to be worth for the feed of stock 20 or 25 cts. per bushel. I supposed this to be a better yield than 75 bushels of Indian corn from the same land—both demanding like dressings of manure.

I do not believe Mr. A., of P., will agree with his townsman C. in this matter—nor do I believe will Mr. D., of P., all of whom have had the honor of being Presidents of the Plymouth County Society. If my recollection is right, in the last speech I heard from him, and he always speaks forcibly and to the point, he spoke encouragingly of the culture of ruta bagas and other turnip crops. ESSEX.

June 13, 1859.

For the New England Farmer.

LITTLE THINGS:

OR, A WALK IN MY GARDEN....No. 19.

While watering some plants the other day, I was led to notice some of the

SIGNS OF A STORM.

My dog, Carlo, has occasionally a fit of eating grass. Now I suppose others have noticed the same fact in dogs; but I never yet saw one eating grass whose act was not followed by rain within twenty-four hours. Others may have met with an exception, but I have not.

The instincts of animals with reference to the weather have been noticed from the earliest antiquity; and I believe the time has arrived when a careful collection of facts should be made respecting the behavior of plants and animals as indicative of the weather.

EARLY AND LATE FROSTS.

While noticing a white frost in my garden where I had hoed a few potatoes, I was led to inquire why it should be so severe there; when a sensible-looking neighbor told me that ground recently hoed in spring was more liable to frost, but when hoed in the fall it would prevent a frost. The reason was at once obvious. In the spring the earth has not been warmed, and evaporation is increased, and cold results, as a consequence, sufficient for a frost; but in the fall, when the ground is warm, stirring it causes an evaporation of warm air and moisture.

It was a beautiful evening, and while taking a walk down the garden I was meditating on the

INFLUENCE OF THE MOON ON THE TEMPERATURE.

Physicists are not inclined to attach much importance to the influence of the moon upon the weather, but it seems to be a well-established fact that when the moon runs high, as farmers say, it is colder than at other times. It is the dread of the farmer that he shall have a frost on the full of the moon, either late in the spring or early in the autumn. He always looks for it at that time, and no other. Farmers in Maine know that if they can get safely by the frosts on the full moon in September, they will not be likely to have a severe frost till the next full moon in October. Farmers have long noticed that when the moon runs low in the summer months, the nights are very warm. Here, I believe, is an interesting field of inquiry, requiring, to be sure, a long series of observations, but which will result in something important to the cause of science and of scientific agriculture.

While painting over the wounds on my apple trees, this week, I was pleased to see the apples well set for a crop, and was led to reflect on the

EFFECTS OF COLD ON APPLE TREES.

I have for several years been led to doubt the generally received opinion of farmers in regard to the causes of a failure of fruit after blossoming full. The present season has been remarkable for two weeks of the coldest weather ever known in June in this vicinity. Water has been frozen the thickness of a dollar. The leaves of locust, beech and sumach trees are all killed—grape vines ditto. On three-fourths of an acre of corn on my land, probably not a hundred hills can be found which are not killed to the kernel, and past recovery, yet the apple trees adjacent are heavily set with fruit. A year ago my orchard was a mass of blossoms, and we had no very cold weather, yet I did not gather but six barrels where I should have expected fifty. I think I can explain the reason. Two years ago my orchard bore heavily. The fall season was favorable for the development of the fruit buds the next year, and when the next year came, blossoms were abundant, but the trees, except a few in a high state of cultivation, were not in a condition to bear fruit. They had been exhausted the year before; I think the weather had but little to do with them. The present year they have recovered their energy, and, frost or no frost, I shall have a good crop.

RHUBARB FOR GREENS.

I did not know till the other day, when a lady told me, that the leaves of rhubarb make excellent greens. They are as tender and delicate as anything I have ever eaten. I think this fact is not generally known.

But as your readers may see that I commenced this article rather *dog*-matically, I fear they may think that I shall close it *cat*-egorically. So enough of little things, till you hear again from

Bethel, Me., June 20, 1859. N. T. T.

For the New England Farmer.

THE LAW IN REGARD TO THE SALE OF MILK.

MR. EDITOR:—It is well known that a law was passed last winter that milk should be sold and bought by wine measure, and that it is in force in our cities many persons will be ready to testify who have keenly felt the difference between the quart they used to receive and the one that is now dealt out to them.

But I am confident that the law is not as strictly adhered to by those who buy milk at wholesale, as it is by those who sell at retail, and I know that in many instances milk is bought of farmers in the country for sixteen and seventeen cents per can, the cans holding seven quarts beer measure, making the price per quart, beer meas-

ure, two and one-half cents, while the milk is sold in our cities for five cents a quart, wine measure, which any one can see at a glance is giving the dealers an enormous profit, while the farmer is not receiving enough for his milk.

Now, it seems to me, that the old adage, "It is a poor rule that will not work both ways," is applicable in this case; and that if milk is sold by wine measure, it ought to be bought by wine measure of the farmer.

I am not a farmer, and sell no milk, yet a sense of the injustice done to those who do sell, prompted me to write this, hoping that it would call attention to the subject, and that something would be done about it.

Knowing that your valuable paper has an extensive circulation among the very class of persons most interested in this matter, I send this article to you for publication. J.

Concord, Mass., June 27, 1859.

REMARKS.—We have a good law for regulating the purchase and sale of milk, and if those who sell milk by the quantity are disposed to submit to the exactions of others, and *transgress the law of the State* every day, let them suffer the consequences. Thank you for calling attention to the matter.

HARVESTING THE GRAIN CROP.

In making a tour of two or three hundred miles last summer, while our farmers were harvesting their crop of small grains, we became convinced that much negligence and waste still prevail, even with some who mean to be tidy and economical farmers.

In harvesting these grains we suppose the first important consideration to be, the time of cutting. When *is* the proper time to cut wheat, barley and oats? Some persons do not commence until the leaves on the stem are dead, and the berry or kernel is so far advanced as to be considerably dry. Under this practice there must be considerable loss experienced in both grain and straw. At this advanced stage the head has become dry, and the little scales which encircle and hold the grain are separated from it, so that at every touch it shatters out and is lost. The process has also gone too far to permit the grain to produce as much flour and nutriment as it would if the harvesting were done at an earlier day.

As wheat or barley approaches maturity, the careful observer will notice that the stem, immediately below the head of grain, shrivels, and has the appearance of having partially become dry. When this appearance has covered about six inches of the stem immediately below the head, we have been in the habit of cutting these grains; the kernel is then glazed and just going out of the milky state. "If not reaped until the straw is wholly yellow, the grain will be more than ripe, as the ear generally, except in late seasons, ripens before the entire of the straw; and it is observable that the first reaped usually affords the heaviest and fairest sample."

Careful observation will show that "the indications of ripeness in wheat are few and simple. When the straw exhibits a bright golden color from the bottom of the stem nearly to the ear, or when the ear begins to bend gently, the grain may be cut. But—as the whole crop will not be equally ripe at the same time—if, on walking through the field, and selecting the greenest heads, the kernels can be separated from the chaff when rubbed through the hands, it is a sure sign that the grain is then out of its milky state, and may be cut with safety; for although the straw, may be green to some distance downwards from the ear, yet if it be quite yellow from the bottom upwards, the grain then wants no further nourishment from the earth, and, if properly harvested, it will not shrink. These tokens will be found to sufficiently indicate the ripeness of wheat, barley and oats; but that of rye arises from the straw losing some of its golden hue, and becoming paler. The usual practice in England is to cut down all grain before it is quite ripe, and to leave it in shocks until the grain is perfectly matured and hardened."

This extract, which we take from an excellent English work, does not precisely agree with our remarks in relation to the appearance of the stem, as the latter, we have often observed, may appear nearly dry for a few inches immediately below the ear, while the rest of the stem is quite green. But the suggestions we have quoted are valuable, and will aid many cultivators in deciding at what particular moment to cut their grains.

Another loss in this harvest is occasioned by the careless manner in which grain is gathered and tied up, being brought into bundles uneven at the ends and of irregular size, so that in the shocking and after-handling, the bundles are burst, and the ears broken off. The stooking, or shocking, is often so badly done that they do not shed the rain, or protect the bundles from dews, and are upset, and scattered by the wind. They are often left uncovered, so that in wet weather, as was the case at the last harvest, the loss must be considerable in the quantity of grain, and more still by a depreciation of its quality. We were gratified to notice in our ramble last summer that in some districts, caps, or coverings of cotton cloth, were used on stooks of grain in the field. It had been raining for three days—a part of the time heavily—and yet most of the stooks so covered had received no damage whatever—all their upper portions being entirely dry. We thought that about three farms out of four along a range of towns in south-eastern New

Hampshire, were using these coverings. There can be little doubt but that the saving by their use in a single season like the past, nearly paid their cost.

It is a great loss to hurry over, or to perform indifferently, the labor of harvesting, because then the crop has matured, and only needs one step more to return to the cultivator its profit. The gathering in, and stowing away in the barn, should be conducted with great care, to prevent waste of grain, to protect it from vermin, and to give it proper ventilation, so that it shall not heat and start the germ of the seed.

For the New England Farmer.

ESSEX AGRICULTURAL SOCIETY.

In the "Sixth Annual Report of the State Board of Agriculture," I find the gentleman who was appointed to visit the fall exhibition of our society, speaks of the show of fruits, which he says was "very large and perfect specimens, both of apples and pears," but that he was "somewhat disappointed in the comparatively small number of dishes of fruit presented, and that upon inquiry, learned that premiums were only offered for certain varieties, and that all others were excluded." He is right when he says, "This course has been adopted for the purpose of keeping out a flood of ordinary and inferior varieties which would otherwise crowd the tables." But when he goes on to say, "that it is only by comparing the good with the bad that the superior qualities of the one and the imperfection of the other are brought out," I would ask him, "how long are we to lumber our tables with worthless varieties? At what time shall we commence this reform?" I apprehend that when a variety of pear or apple has been grown by various individuals, and they all uniformly consider it as worthless, or at any rate, not at all comparable with other and vastly better sorts, the time *has arrived* when this *expurgation* should begin. Regarding the "small number of dishes of fruit," I would inquire of him, at what county Agricultural Society he saw exhibited the past season, *more* than was seen at Danvers? *Nearly one thousand dishes and plates!* The premiums were offered, not by "a certain arbitary standard, nor for the consideration of the amateurs," but for the benefit of the farmers of Essex county, that they may be induced to cultivate those varieties which may be most remunerative. Ours is *not* a horticultural, but an agricultural society, and in additon to the list of premiums, we award gratuities for any "acknowledged superior fruit" or new varieties presented.

He says, "there were some important omissions of generally acknowledged superior fruits." If he means by this, superior flavored pears, we admit that there are fine sorts which may succeed in the sheltered gardens of our cities, that will not flourish in open farm culture. Then, again, there are others; the St. Michael and St. Germaine, that are still cultivated at the South, that blast all over New England. Regarding the number of varieties for which premiums are offered, there are a greater number of named pears than would be give by the generality of our most experienced cultivators; for out of the hundreds that have been introduced, it would be difficult to name over 20 that we should commend for general culture. J. M. IVES.

Salem, May 25, 1859.

EXTRACTS AND REPLIES.

WHITE SPECKS IN BUTTER.

I would say in reply to Mr. Holmes, of Grafton, Vt., that he is correct in regard to keeping the cream which adheres to the churn and covers during the process of churning entirely from the butter; but in order to avoid it in your next churning be equally as careful to keep it from your cream-pot, or you will not only have plenty of the said specks, but an unpleasant flavor to the butter. It need not be lost, as every good housewife knows well how to enrich her biscuit with it, or whatever she chooses.

Mrs. "L. E. H.," of Ludlow, Vt., is on the right track, but I hope by my own experience and that of others, to help her along one pace more. I agree with her in saying it is the same milk which adheres to the cream in the process of skimming, but instead of stirring each day, would say, *not* stir, but let each day's gathering of cream be put on the top and remain so, thus keeping more closely the air from the older cream, which is very necessary to promote a fine flavor to your butter, and thereby exclude the necessity of rinsing butter, which should never be done without washing until the water is perfectly clear. Please try the experiment in saving cream, and my word for it, you will not be troubled with white specks Keep the cream-pot covered close, to avoid both white and black specks. H. E. C.

Putney, Vt., 1859.

PATENT ROCK LIFTER.

Can you inform me who is the proprietor of the Rock Lifter, recently employed by the Shakers at Harvard, Mass.? Was that the same machine, the operation of which you describe in the *N. E. Farmer*, sometime last summer or fall? Can it be used to advantage for pulling stumps as well as lifting rocks?

REMARKS.—Thomas Ellis, Esq., Rochester, Mass., or Nourse, Mason & Co., Boston, sell the machine. Some persons who have tried it say that it pulls moderately sized stumps well. Price, $225. We have sent your letter to Mr. Ellis.

A GOOD COW.

Mr. Secretary Dodge informs me that he has a cow, which he purchased five years since, for $37. He has kept her for his own family use, and fed her as good cows should be fed. Since the 1st of May, there has been made from her milk 77 pounds of butter, over and above the milk and cream needed for family use. He is entirely confident, if all her milk could have been used for the making of butter, she would have yielded at least two pounds of butter per day. While such butter stock can readily be found on our own native hills, there will be no occasion to go

abroad for butter. At a recent visit to the Treadwell farm, I learned it took more than twelve quarts of the milk of the Ayrshire stock, there fed, as it ordinarily flows, to yield a pound of butter. Ten quarts, or twenty pounds of the milk, from Mr. Dodge's cow, will do this.

June 27, 1859. ESSEX.

PROFIT OF HENS.

As there is considerable talk about the profits of keeping hens, I thought I would give you a bit of experience. A little over one year ago I commenced keeping debt and credit with a few. I had but 11 hens and 1 rooster; I kept the account one year, and it stands thus:

Cr. by 120 dozen eggs at 13½ cents	$16,20
Cr. by 19 pounds chickens at 9 cents	1,71
	$17,91
Dr. to feed, worth	6.21
Balance in favor of hens	$11,70

They were fed in the summer with corn, oats and wheat screenings, with occasionally a mess of warm dough or potatoes, boiled and mashed and given to them warm. They did not have a very good chance, as we had to keep them shut up a while in the spring on account of the crops. In the winter they were kept in a rather cold stable. Some of the hens are full blooded black Polands, the rest a mixture of the Poland, bantum and what we call the old-fashioned hens. I think the Polands are as good layers as there are. BLACK POLAND.

Montpelier, Vt., June, 1859.

SEED CORN.

In the *Farmer* of June 1st, I noticed the following: "Corn for planting should be selected from an equal number of male and female ears, shelling and mixing them together." Signed, S. P. Baker. I believe that plants have sex as well as animals, but being no botanist, permit me to ask a few questions.

If you plant a kernel of corn alone in a field, why does the stalk ever "ear" at all? In a pile of ripe corn, how can the male and female ears be distinguished? Will you or Mr. Baker, who, from an experience of eighty-three years, is doubtless well posted, inform me upon the subject? What is the most convenient size for hay-caps? A FARMER'S BOY.

Charlemont, Mass., June 22, 1859.

REMARKS.—Two yards square for hay caps.

STUMP-FOOTED CABBAGE.

Can you tell me what makes cabbages grow stump or clump-footed, and what is a remedy? I have often seen large pieces nearly entirely lost from this cause, for a clump-footed cabbage will not head. ALBERTUS.

REMARKS.—We have heard it said that cabbage seed *raised from the stumps*—that is, where the head has been cut off and the stump set out, — will produce clump-footed cabbages. The whole plant, head and all, should be set, to raise seed from.

HEDGES.

I have a hedge in progress, part of which has arrived to the height desired. Will you or some of your correspondents inform me, through your columns, at what time and how often it should be pruned? and oblige, HEDGE.

Derry, N. H., 1859.

REMARKS.—Prune it now, and if the growth continues luxuriant, prune again in six or eight weeks.

SHEDDING MILK.

I wish to be informed of the liquid that has been recommended by some for the suppression of milk from the cow's udder where the cow sheds her milk.

Cambridge, Vt., 1859.

REMARKS.—The trouble is probably organic; some of the muscles or other parts not acting with sufficient force. The liquid to which you refer may be glycerine or liquid cuticle, but we doubt whether its use would prove efficacious.

For the New England Farmer.

PASTURING—COWS—WOODLAND.

MR. EDITOR:—If any one thing is neglected, forgotten, and left to take care of itself, it is the old farm pasture of New England. How many farmers, and good farmers, too, that crowd to the ridge-poles their barns with hay; that fill to overflowing their corn and grain bins, all, (excepting wheat, to their shame,) still trusting to the same old pasture, unassisted, unnourished; their flocks and herds feed there; generations forgotten and living, still pull down the old pasture bars; perhaps fifty to one hundred acres is the "area of freedom," for fifteen or twenty cattle; they ramble, (poor creatures,) grub and nip all the day long, to carry home their scanty messes and empty stomachs. Now summer has ended, they have gained a little vitality of the skin, and all they have lost is their old shaggy coats, aided by a long tail, and plenty of bushes in rubbing it off. What a preparation this, for another winter's campaign; to enter the leanto thin, and come out thinner, in spring. There is no money in this operation.

The pasture should be the fattening ground; the farmer enriches his land to make his hay to feed his winter's stock; why should he not make rich ten or fifteen acres of his good old pasture, and make it produce more fattening feed than seventy-five to one hundred acres of the old mossy mounds, that time has affixed to decaying nature? The advantages are, a self-manuring process; it necessarily becomes so, the range being made small; animals inclined to be breachy are contented to graze in good feed, and lie down quietly in their own enclosure. This is the place to give the calves and colts a start; the young stock, growth and sleekness; the faithful ox, muscle and fat; the noble cows, flesh and full udders, to increase the business of the "milk-man," to better fill and enrich the cream-pot, and sweeten the butter for a better price in market. Dollars and cents come of good pastures. Hav-

ing established your pasture lots in proportion to your farm wants, which can always be kept in a high grazing condition, and at little expense, convert the balance into woodland, and a few years will give you a forest of great value. The dead pasture waste, sometimes half of the farm territory, seems to me one of the great farming oversights of the more populous parts of New England. How often do we see the "axe laid at the root of the tree," to make more "tillage land," while the old, cleared acres, are suffering for want of the plow. The pasture lies, a bald, grimmy waste, perhaps, and probably, the best soil on the homestead. Neither spade or plow has opened its surface since the removal of its primeval forest. Within its bosom, may be found rocks enough to lay your walls, and at odd jobs, with small expense, a great and permanent work can be accomplished.

Mr. Editor, I humbly trust you and every farmer will subscribe to my doctrine; and my only regret is, my inability to do the subject greater justice. H. POOR.

Brooklyn, L. I., June 12, 1859.

For the New England Farmer.

ONION FLY.

A correspondent in your last *Farmer* recommends soaking onion seed "36 hours in strong soap-suds before sowing," with the impression that the eggs of this insect are laid upon the seed. In this I apprehend that he is entirely mistaken. I have, by the strictest examination with the microscope, *before and after soaking*, been unable to detect eggs or germs of any kind in the seed. Another quite as strong proof that the eggs are not found upon the seed, is, that one cultivator this spring, who sowed three pounds of the Weathersfield red onions, has not as yet been able to detect a single instance of the worm in his patch, while another, who sowed two pounds of seed *from the same lot*, has already lost, or nearly so, his whole bed by this destructive worm.

Regarding the various methods adopted in England for the destruction of this pest which I forwarded to you some days since. I would particularly recommend the *trenching or deep plowing* of the land in the fall, or just before winter, believing that the chrysalis of the insect, if buried deep, will be unable to develop itself, particularly if thus buried below the influence of the sun and air of spring. In this matter, however, I am instituting experiments by transplanting these onions carefully, without disturbing them, into boxes of various depths, in order to ascertain how deep they descend to undergo this transformation. I imagine that this insect, like the canker worm, has its period of growth, and also its desent into the ground. I have, upon a small bed, applied tobacco water without effect, and more recently tar-water and soot; this latter has a better effect. As regards guano, there have been various opinions, and it has occurred to me that these conflicting accounts have been in consequence of this insect appearing on one part, (it may be the corner of his plat,) and then applying guano over the whole bed, and this worm not extending itself *that season* over the whole bed, he assumes that he stopped his farther progress. With regard to this insect travelling along under the ground, I think this doubtful; they may, and they undoubtedly do, enter all the roots in near proximity, but farther than this, they probably do not progress until the next season, when the perfect insect emerges in the spring.

I received two ounces of the Weathersfield red onion, last spring, part of which I sowed, and the bed is well filled with the worm. The balance of this seed is that with which I have made these experiments of soaking. J. M. IVES.

Salem, July, 1859.

THE RIVER OF LIFE.

Blood is the mighty river of life, the mysterious centre of chemical and vital actions as wonderful as they are indispensable. It is a torrent impetuously rushing through every part of the body, carrying by an elaborate net work of vessels, which, in the course of the twelve months, convey to the various tissues not less than three thousand pounds weight of nutritive material, and convey from the various tissues three thousand pounds weight of waste. At every moment of our lives there is nearly ten pounds of this fluid rushing in one continuous, throbbing stream, from the heart through the great arteries, which branch and branch like a tree, the vessels becoming smaller and smaller as they subdivide, till they are invisible to the naked eye, and then they are called capillaries, hair-like vessels—although they are no more to be compared to hairs than hairs are with cables.

These vessels form a net work finer than the finest lace, so fine, indeed, that if we pierce the surface at almost any part with the point of a needle, we open one of them, and let out its blood. In these vessels the blood yields some of its nutrient materials, and receives in exchange some of the wasted products of tissue; thus modified, the stream continues its rapid course back to the heart, through a system of veins, which commence in the myriad of capillaries which form the termination of the arteries. The veins, instead of subdividing like the arteries, become gradually less and less numerous, their twigs entering branches, and their branches trunks, till they reach the heart. No sooner has the blood poured into the heart from the veins, than it rushes through the lungs, and from them back again to the heart and arteries, thus completing the circle or circulation.

This wonderful stream, constantly circulating, occupies the very centre of the vital organism, midway between the functions of nutrition and excretion, feeding and stimulating the organs into activity, and removing from them all their useless material. In its torrent, upwards of forty different substances are hurried along; it carries gases, it carries salt—it even carries metals and soaps! Millions of organized cells float in its liquid; and of these cells, which by some are considered organized entities, twenty millions are said to die at every pulse of the heart, to be replaced by other millions. The iron which it washes onward can be separated. Professor Berard used to exhibit a lump of it in his lecture room—nay, one ingenious Frenchman has suggested that coins should be struck from the metal extracted from the blood of great men.

DESIGN FOR A SUBURBAN COTTAGE.

In accordance with an announcement made at the commencement of the year to furnish new and useful illustrations to the *Farmer*, we present to-day another of the chaste, simple and yet very beautiful designs by Mr. G. E. HARNEY, of Lynn. Those already given, Nos. 1 and 2, have been very favorably received, and we are confident that No. 3 will afford valuable suggestions that will be made practical by many individuals.

The sketches which we now offer comprise a design and plan for a cottage suitable for a suburban or village lot. Though the exterior is somewhat ornamental in its character, there is nothing about it costly or difficult of execution—no detail which cannot easily be wrought by any ordinary house carpenter.

It is designed to be of wood, and covered in the usual vertical and battened manner. The roof projects two feet and a half, and is supported on brackets. The house should rest on a foundation projecting, at least, three feet above the level of the ground. The first story is 10 ft. high in the clear, and the second 6 ft. at the eaves and 10 ft. high at the ceiling. The plan comprises

No. 1, gallery, 5 ft. wide. No. 2, hall, 7½ ft. wide and 20 ft. long, containing stairs to chamber and cellar.

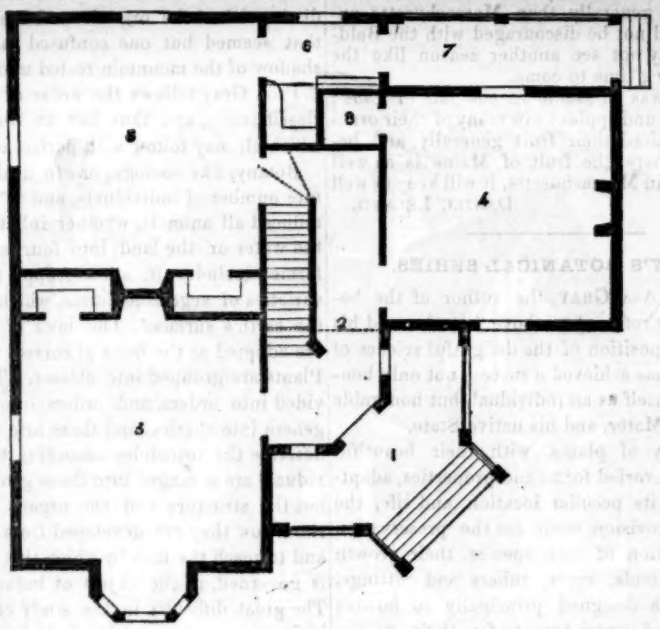
From the hall we enter No. 3, the parlor, 16 ft. square, in the front of which, and forming its principal feature, is a bay window overlooking the front yard.

No. 4, is 15 ft. square, and may be used either as a bed-room or living-room. No. 5, the kitchen, is 15 ft. by 16; it contains a large closet, and connects with a pantry, No. 6, which opens upon a gallery, No. 7, leading to the yard. Under this gallery is the outside entrance to the basement.

The second floor contains 4 chambers, each furnished with a large clothes-press; two of these chambers are lighted by dormer windows.

Cost, about $1600 near Boston.

THE TEETH.—The teeth are divided into three classes, each class fitting us for a different kind of food: First, The incisors, or cutting teeth, being eight in number, four top and bottom; those of the upper jaw being larger, and falling over the under ones in closing the mouth. The office of these teeth is for dividing and cutting the food, by bringing it between the surfaces of the sharp edges. Second, The canine teeth, so called from their resemblance to the dog's tooth, are placed on each side of the incisors, making two in each jaw. The intention of these teeth is to lay hold of substances, and are peculiar to all carnivorous animals, and of which man is con-



GROUND FLOOR PLAN.

sidered the most harmless. Third, The molars, or grinders, are ten in each jaw, and serve to fit the food for the stomach, by dividing it into minute portions, or pulp. Thus, it will be seen that nature designed man should partake of each of the foods common to the carnivorous, herbivorous, and granivorous animals. There are other teeth, appearing late in life, called "wisdom teeth;" but frequently these are not to be met with at all.

For the New England Farmer.

EFFECT OF WEATHER ON FRUIT TREES.

MR. EDITOR:—In reading the article of your "Sandy River" correspondent, it suggested to my mind some thoughts that may be a benefit to him and others. He says, "The last winter has proved to be a disastrous one to fruit trees in the interior of Maine; in one instance the mercury falling to 40 below zero. This circumstance affords an opportunity to test the capacity of different varieties of fruit trees to resist the effects of climate." I had supposed the question nearly settled that it was not the coldness of the winters that destroys our fruit, but other circumstances, which, perhaps, we may find out by looking on all sides of the question.

The winter of '55'–56, and '56'–57, was colder than 1858–9; the mercury fell lower in Massachusetts, and I think the papers gave it lower in Maine. But I do not recollect hearing anything in particular of the injury done the fruit trees.

He says, "The past winter has proved the Baldwin is the most tender variety of the apple yet introduced into Maine." The reason is obvious; there is no tree that has ever been cultivated in our nurseries, that will make wood so fast as the Baldwin, hence its tenderness. Notice his expression, "grafted at considerable height above ground, and on the slowest growing trees."

There is no danger of the Baldwin, if you do not grow them too fast. Now let me show you an instance in my own experience: In 1822 or 1823 I set out twenty-five Baldwins and twenty-four russets, (and one greening by mistake,) and as I said to you in my other communication, the winter of 1830 and '31 killed the twenty-four russets, and not one of the Baldwins! Now what was the reason of this? The russets were set on the richest soil, and grew the most; the greening was set on the richest spot, and made more wood than either of the russets, and is a fine tree now; so are all the twenty-five Baldwins. Now I would like to know why the greening tree escaped the injury the others felt; is it more hardy? It is a settled question in my own mind, that it depends upon the growing of the trees late in the fall, and of our having gentle or light frosts at first to check the growing of trees, and preparing them for winter, that prevents the injury, and not the severity of the winter that causes it.

If it is true that Maine has suffered the past year, I doubt whether they have as much as Massachusetts did in 1831. I do not recollect of hearing that Maine suffered at that time. Maine has its advantages and its disadvantages. In 1834, Maine had more apples than all the rest of the States. The frost cut off almost all the fruit in the other States, but in Maine, the season being later, escaped the frost. In Maine the apples are later, do not ripen so early, do not ripen

so perfectly, do not decay so soon, and will make better cider, generally, than Massachusetts apples. I would not be discouraged with the Baldwin; we may not see another season like the past for a long time to come.

N. B.—I was in Maine in the fall of 1834; bought cider and apples; saw many of their orchards, and noticed their fruit generally, and believe that where the fruit of Maine is as well cared for as in Massachusetts, it will keep as well or better. DANIEL LELAND.

GRAY'S BOTANICAL SERIES.

Professor ASA GRAY, the author of the botanical works referred to above, has devoted his life to the exposition of the delightful science of botany, and has achieved a success not only honorable to himself as an individual, but honorable to his Alma Mater, and his native State.

The study of plants, with their beautiful and infinitely varied forms and properties, adapting each to its peculiar location and life, the wonderful provision made for the preservation and propagation of each species, their growth from seeds, buds, roots, tubers and cuttings, —their fruits designed principally to furnish protection and nourishment for their germs, and secondarily to furnish food for all animal life, cannot but awaken in the mind of the student, wonder, reverence and love for their Creator, as he witnesses the proofs of his inexhaustible resources, his infinite skill, and his boundless benevolence.

To this proper effect of his studies, Mr. Gray has obviously yielded his own mind, while at the same time his enthusiasm in his chosen pursuit nas carried him onward through all the difficulties and intricacies of the science, until he has become the most accurate and accomplished botanical teacher in the country. His statements are always clear and reliable, and the student feels that he is guided by the hand of a master. Many of the educational books of the present day are mere compilations, soulless skeletons, and it is in the highest degree refreshing to find an author who speaks right on, telling us what he does know, and instructing us out of the accumulated treasures of his own mind. Such an author is Prof. Gray. He imparts to his readers a portion of his own enthusiasm, and keeps up in their minds an unflagging interest, while they follow his clear, concise and consecutive statements, and almost before they are aware, they find themselves enlightened with some rays of that light which had shone so clearly in the mind of the author. What was before confused and mysterious, and little more than a dark mass, gradually arranges itself into clear and well-defined forms, which become instinct with beauty and life, as when the morning sun, rising above some distant mountain crest, illuminates, and distinguishes the organic and inorganic forms, that seemed but one confused mass, while the shadow of the mountain rested upon them.

Prof. Gray follows the order of nature in his classification, and thus has an unerring guide, which all may follow with perfect confidence.

Botany, like zoology, has to deal with an infinite number of individuals, and as the latter has reduced all animals, whether inhabiting the air, the water or the land, into four classes, so the former includes in a few groups, the countless varieties of vegetable forms, which spring from the earth's surface. The laws of development are adopted as the basis of correct classification. Plants are grouped into classes. These are divided into orders, and orders into genera, and genera into species, and these into varieties. To describe the principles according to which individuals are arranged into these groups, to point out the structure and the organs of plants, to show how they are developed from their germs, and to teach the laws by which this development is governed, is the object of botanical science. The great difficulty in the study of botany, has hitherto been the use of technical terms, and unpronounceable names, as though botanists intended, like the hierarchs of Egypt, to confine their knowledge to men of their own class.

Prof. Gray has succeeded admirably in his two elementary books, in conveying a knowledge of the principal parts in botany, in language that can be readily comprehended by every intelligent child. They are illustrated by a multitude of drawings, which are among the most perfect and best executed cuts that we have ever met with in any educational book. They are printed on good paper, and with a clear type, and are highly creditable to the press—that of Messrs. *Ivison & Phinney*, New York—from which they have issued.

We cannot doubt that the little book, "How Plants Grow," and the "First Lessons," will soon take the place of all other books on the subject, in our schools. The larger books will meet the wants of more advanced students.

HEN MANURE.—The excretia of birds of all kinds is valuable as manure, and if properly used, will invariably pay for the pains-taking. Lime, ashes or other alkalies, should never be mixed with hen manure; such treatment throws out the ammonia, and forms other compounds of lessened value. When dry muck, charcoal dust, woods-earth, or other cheap divisor, can be procured, compost hen manure with it, and if wetted with dilute sulphuric acid, so much the better; this will fix the ammonia as a sulphate, which is soluble, but not volatile, like the carbonate of ammonia. No farmer can afford to sell his hen manure to morocco dressers, even at four times the usual market price.—*Working Farmer.*

For the New England Farmer.

SELECTION OF STRAWBERRIES.

STATEMENT OF WM. R. PRINCE.

American Institute—Farmers' Club—June 20th.

The great point in all culture is economy and its results, and the true test of the strawberry is farm culture, with or without cutting off the runners.

The following I consider the best varieties for field cultivation, where the plants are to *cover the entire ground*, thus avoiding extra labor and expense, and making the whole of the soil available.

Scarlet Magnate, the heaviest of all strawberries.

Diadem, splendid scarlet, very productive; Mr. M. Bergen, of N. J., stated that he had not deemed it possible for so large a crop of fruit to grow on a given space as he saw growing on this variety.

Eclypse, early, bright scarlet, upright, clean and beautiful.

Minerva, estimable quality, produces more than twice Wilson's Albany.

Imperial Scarlet, large, bright scarlet, upright, firm for market.

Perfumed Pine, seedling of Burr's Pine, obtuse cone, very large, bright scarlet, sweet, juicy, high flavor, vigorous, very productive, combines more valuable qualities than any other berry.

Hovey, qualities well known.

Malvina, same qualities as Hovey, but more productive, brighter color, higher flavor and earlier.

Florence, very large, conical, splendid scarlet, fine flavor, vigorous, very productive, valuable.

Globose Scarlet, large, rounded, very productive.

Prince's Globose, a late variety, large, scarlet, moderate flavor, very productive and vigorous, ripens twelve days after the general crop, and therefore valuable as a late market fruit.

Six best staminate varieties for field culture, requiring to be cultivated in stools, and the runners to be cut off, thus however occasioning additional expense, besides leaving much of the ground unoccupied,—Scarlet Prize, Wilson's Albany, Sirius, Barry's Extra, Primate, Montrose.

Varieties preferable for families, being of finest flavor,—LeBaron, Ladies' Pine, McAvoy's Superior, Sirius, Longworth's Prolific, Ward's Favorite, Globose Swainstone, Fragrant Scarlet, Hooker, Imperial Crimson, Perfumed Pine, Minerva, Scarlet Prize.

ROOT CROPS---FODDER.

We are glad to see a return to the culture of roots, such as turnips, ruta bagas, mangel wurtzels and carrots, among us. Not that they have ever been wholly abandoned, but the culture of them, for the last ten years, has fallen off very much. People talk about the comparative value of these things.

We all know that there is great difference in the nutritive power of the articles which we use, not only for our own food, but for the food of our domestic animals; and we also know, that we, as well as our animals, are so constituted as to require this same variety for the continuance of health and activity. Keep yourself on one single article of concentrated food, and you may perhaps grow fat, but you will also become sick, or languid and spiritless. Sailors know this. When they get into situations where they are obliged to live on one kind of food, they find their health decline, and their strength and vital powers to flag, and they finally have to "give up the ship." It is, therefore, a duty to cultivate a variety of articles to be used as fodder for our stock, during our long winters. Good hay is the staple crop for this purpose. It is to cattle what bread is to their owner, the staff of their lives. But roots of different kinds make an agreeable and a profitable variety. In olden times, when the potato rot was unknown, the potato, being the easiest raised and preserved, was much used for cattle food. The potato rot put a veto on this root as stock food.—*Maine Farmer.*

For the New England Farmer.

BIRDS VS. FRUITS.

Regarding the service or injury of birds, of which so much is now written, I am aware that they destroy considerable fruit, much more than at the time of Wilson. I think that all animals *acquire* a taste; for example, the domestic pigeon will now eat the acid currant. Some years since I obtained of Col. Jaques, of Charlestown, a pair of Bremen geese for a farm; these birds I kept for a fortnight, and during that time their food was grass; corn they *would not eat*. Some twelve months after this I saw these birds on a farm in Danvers, and was then told that they were great eaters of corn. I say above that in the time of Wilson birds could not have been called such plunderers. In his description of the purple grakle or crow blackbird and the common crow, (these of all birds considered the most destructive to the corn,) he thought that they *more* than compensated for their depredations, by "following in the furrow of the plow, and that their services in the spring, in destroying grubs and larva, of which they eat *prodigious quantities* before, and, as if to compensate for the grain they take, in the fall."

In the first edition of Manning's Book of Fruits I inserted an article on this subject from which I take the following extract:

"In speaking of the annoyances sustained from birds, I am persuaded that these plunderers as they are sometimes called, more than compensate for their inroads upon our orchards by their services in the spring, and during their incubation, in destroying insects; in the breeding season we see them constantly flying from the nest for a supply, and returning with a grub or a worm. I have seen the ampelis, or cherry bird, that remarkably silent and *dove-like* species, upon my apple trees, when the canker worm was about half grown, destroying them in numbers, and although called plunderers, they are, in fact, benefactors likewise.

"Public economy and utility, says one, no less than humanity, plead for the protection of the feathered race, and the wanton destruction of birds, so useful, beautiful and amusing, if not treated as such by law, ought to be considered

as a crime, by every moral, feeling and reflecting mind."

If we should make war upon the crow, blackbird and blue Jay, particularly the last named, it would be for their thievish propensities in destroying the eggs of our truly insectivorous birds.

Salem. I.

For the New England Farmer.

SUPPORTING DWARF PEARS—PROPAGATING GRAPE VINES.

MR. EDITOR:—In the last number of the monthly *Farmer* I find an article on supporting transplanted trees, from the pen of your able correspondent, "J. M. I." I like the plan which he describes very much, and it has occurred to me that it would be valuable as a permanent support for dwarf pear trees, which are liable to be swayed to and fro by the wind, especially in the spring and fall, when the ground has been softened from heavy rains.

Now if a large, strong stake of some durable kind of wood were used, it would last for a long time, and if it were well coated with gas tar, it would be much more durable. It need not rise more than a foot above the surface of the ground, and if the tree were kept bound to it, it would certainly hold the tree firmly in its place. Such a support would be of much service to dwarf pear trees standing in places exposed to high winds.

On another page of the *Farmer* for June, may be found an article on the $100 grape premium offered by a gentleman in N. H. The writer says that roots are preferred, but that cuttings two inches in length will answer. As the premium is to be awarded in two years after the roots are planted, I suppose that these short cuttings are to bear fruit the second year. Will some one posted on such matters tell us how such cuttings are treated, to make them produce fruit so early? If by grafting, give us the mode of doing it, as I have tried the ways given in the books, but never could make them succeed; they would grow an inch or two, and then die. I should be very glad to learn how to graft the grape successfully.

Can you tell me how to distinguish the Angers quince from the Orange? Is there any difference in the leaves of the two varieties?

AN OLD SUBSCRIBER.

Clinton, June, 1859.

REMARKS.—We do not know.

THE COLLEGE JOURNAL OF MEDICAL SCIENCE.—This work is published monthly at Cincinnati; is a magazine of 48 pages, has six editors, and is well spoken of by the press of the country. It has many medical terms, of course, but the plain, common sense that pervades its pages is refreshing. We like it, especially for its liberality, and thank the editors for their manly defence of Dr. CURTIS, of Hartford. Carry out the principles laid down in your article on "Illiberality," and you will not fail to make your journal popular and useful.

For the New England Farmer.

WHY DO YOU NOT PURCHASE A MOWING MACHINE?

MR. EDITOR:—If the above question were put to many of our farmers, they would respond by saying, "That the manufacturers are continually making improvements, and I intend to wait until I can get the best."

Now let us examine this reply for a few moments, and see if it will abide the test of sound reasoning. I presume that I have your assent to this proposition: That until recently, nearly all the inventive genius that has been expended, has been in the line of producing and cheapening our apparel and our equipage instead of our food, the most important article. Therefore, the time has fully come when the latter should receive its full share of inventive talent. To make this most effective, it is manifest that on the part of both manufacturer and practical farmer, there should be mutual sympathy and cordial effort. I hold, that there is no ingenuity, skill, or theory, applicable to some agricultural implements, which will not utterly fail when tested by putting the same on, or into the ground, by a practical farmer. Hence it is the duty, I think, of farmers to co-operate with the manufacturer in his efforts to improve and perfect agricultural machines and implements. Should he not, therefore, purchase and use those machines, although imperfect, and in the process of using them, report to the maker of them their failings, or suggest improvements? In this way, I am satisfied that such labor-saving machines may be obtained as shall very much facilitate, and render farming attractive in New England. If this reasoning is correct, the above observations will apply with peculiar force to mowing machines. The practical utility of a machine for cutting grass is now a question past controversy, or discussion. It is only a question of time to prepare the surface of our mowing lands, and the machine best adapted to do the work. I do not propose to enter the partizan controversy respecting mowing machines. I do not profess to be a special advocate for either of them, and have refused to be a paid agent for the sale of them from two establishments.

I was present at the trial of mowers in Boylston (June 14,) and saw the operation of the five machines, and for the first time saw the working of the Manny machine. I have also read in the *N. E. Farmer* the report of the trial by "Truth and Justice," and the reply by Mr. Brown. After carefully reading these statements, I apprehend they may not be an exception to the general rule in such cases that the exact truth is to be found "between them." If I were called upon to correct them, I should say that "Truth and Justice" had not given sufficient credit for the cutting of the Manny machine, and Mr. Brown had overstated the difference of draft between the two. While I do not profess to be a partizan in this matter, I do confess that I am much pleased with the working of the Ketchum patent, as now manufactured by Nourse, Mason & Co. It is also my impression, confirmed by six years, experience, that in order to be adapted to New England farms as we find them, and to be popular throughout New England, every machine must be reduced, substantially, to the construc-

tion of the Ketchum mower. The manufacturers of the various machines will call this a sweeping observation, and demand my reasons.

The mowing lands of New England will always present obstacles, more or less, to the mower, such as apple trees, boulders, stumps, uneven surfaces, &c. We are bound, nevertheless, to have a machine which will work, notwithstanding these obstacles. But under these circumstances, the demand is imperative that we have a mower in its construction simple, strong, compact, "handy;" one into which we can readily insert cutters of different length, from a three foot to a six foot, according to the condition of the grass, surface or obstacles. This idea of changing cutters carries with it an importance which farmers do not yet appreciate. My own experience enables me to say that it is a most happy arrangement by which I accommodate my machine to the grass to be cut, and the work to be done, to the capacity of my team. I may be mistaken, but I apprehend that I am correct in saying there is now no machine capable of meeting the above demands but the Ketchum patent.

The labor of taking apart and of re-adjusting is a consideration with me in favor of the small iron machine. Last fall, a neighbor came to me for my machine to cut his rowen; said that he had been to three owners of the Manny, and they refused because their machines were taken apart, and it was too much work to "rig up." The Ketchum, occupying four square feet in the corner of my tool room, was ready for action in less than ten minutes.

When my first machine had more than paid for itself, and when the manufacturers of both kinds had made great improvements, I sent it back with directions to send me their best mower, and give me what they could afford for the old one. To this last, I have added the improvements as they have come out, and yesterday I cut a piece of grass sixty rods long, and three wide, (one and one-eighth acre) in less than an hour, the town clock bearing testimony. And yet my horses gave no evidence of the least extra labor. Now, sir, if you do not consider this sufficiently expeditious, come and see me, and tomorrow I will slip in a six-footer, and cut an acre by the side of it in thirty minutes, and yet my horses will not labor harder than they did with the old machine with a four foot cutter.

I do not profess to have any scientific guage by which I can discover the amount of power required to overcome a given amount of resistance, but from careful observation, I have reached this conclusion: That the two horse machine as now manufactured by Nourse, Mason & Co., requires no more power to work it with a six foot cutter, than the machine did with a four foot cutter made five years since. Also, that the one horse machine, with a three and one-half foot cutter, is no harder for one horse, than it would be for the same horse by the side of another in the old machine with a four foot cutter. For this statement, however, you have only my own judgment, based upon the evidence I had at Boylston.

Nearly all the interest manifested in mowing machines in this part of the county, appears to be in behalf of the one-horse machines. This is to be expected, inasmuch as probably nine-tenths of our farmers keep but one horse. These are just now being introduced, and remain to be tested. At the trial at Boylston, their working was very gratifying to me, and I think they come within the ability of most farmers' horses to work them.

The manufacturers of these mowers need no circulars from me, certifying that they are "honorable men," and I will only say to those who purchase of them that they seem anxious to supply all improvements as fast as discovered, and I have no doubt that with the aid and patronage of farmers, they will give us a machine of such price and quality, that every man who has twelve or fifteen acres to cut, will find it for his interest to buy. CHAS. HUMPHREY.

Lancaster, July 1, 1859.

MOWING MACHINES.

A trial of two mowing machines took place on the farm of Mr. Lynde, in Melrose, on Tuesday of last week, which we had the pleasure of witnessing. The machines used were the "Buckeye" and the "New Englander," the first with two horses, and the latter with one. The Buckeye took a swath four and a half feet wide, and the New Englander four feet. Each cut its acre handsomely in *forty-two* minutes. The grass was light, and the ground every way favorable, so that the labor for the horses was not severe,—that of drawing the one horse machine was not a heavier draft than is required in the use of a common cultivator in working corn.

After this trial, each machine was put into heavier grass, where there were some patches of thick clover, and some of it lodged. The New Englander led the way, cutting the grass finely and turning a handsome double swath. The Buckeye also cut a double swath, and did it well.

Since this trial, we have used Ketchum's and Manny's one horse machines in a very heavy growth of clover on our own farm. The field was on a hill-side, was encumbered with apple trees twenty-five feet apart, and the clover in many places badly lodged, but both machines cut it as well as could be reasonably expected. It seems to us that the draft on the Manny was the lightest, but that the Ketchum had more facility in turning, and could be moved over the cut grass, to go from place to place, with greater ease. Where a person cuts fifty tons of hay annually, either machine will pay for itself in three years.

Many trials of machines are taking place, and the public mind seems at last to be aroused to something like a proper appreciation of their merits.

OILING HARNESS—LEATHER, &c.—Oils when applied to dry leather, invariably injure it, and if to leather containing too much water, the oil cannot enter. Wet the harness over night, cover it with a blanket, and in the morning, it will be

damp and supple, then apply neats-foot oil in small quantity, and with so much elbow-grease as will insure its disseminating itself throughout the leather. A soft, pliant harness is easy to handle, and lasts longer than a neglected one. Never use vegetable oils on leather, and among the animal oils, neats-foot is the best.—*Working Farmer.*

TIMES GO BY TURNS.

An English Jesuit, Robert Southwell, wrote the following lines of much merit, two centuries and a half ago. The philosophic strain pervading the piece is worthy of admiration.

The lopped tree in time may grow again,
Most naked plants renew both fruit and flower;
The sorriest wight may find relief from pain,
The dryest soil suck in some moistening shower.
Times go by turns, and chances change by course,
From foul to fair, from better hap to worse.

The sea of fortune doth forever flow,
She draws her favors to the lowest ebb;
Her tides have equal times to come and go,
Her loom doth weave the fine and coarsest web
No joy so great but runneth to an end,
No hap so hard but may in time amend.

Not always fall of leaf, nor even spring;
No endless night, nor yet eternal day;
The saddest birds a season find to sing,
The roughest storm a calm may soon ally.
Thus with succeeding turns God tempereth all,
That man may hope to rise, yet fear to fall.

A chance may win that by mischance was lost;
That net that holds no great, takes little fish;
In some things all, in all things none are crossed,
Few all thy need, but none have all they wish.
Unmingled joys here to no man befall;
Who least have some; who most, hath never all.

For the New England Farmer.

MOWING MACHINES.

MR. EDITOR:—I noticed in a recent number of the *Farmer* a communication describing a recent trial of mowers on the farm of Mr. Lamson, in Boylston; the writer signs himself "Truth and Justice." His comparison of the relative condition of the horses does not prove the inferiority of Manny's mower, for every teamster knows that a horse in high condition works better after half a day's exercise, than a fresh horse, especially if the latter is unused to the work, which was the case in this instance.

"Truth and Justice" says that in cutting the double swath the superior excellence of the Ketchum machine was still more apparent. The truth is, all the machines performed their work admirably, nor could any unbiased spectator decide which cut the closest, smoothest, or evenest. "Even "Truth and Justice," himself, could not have selected, on the next day, the swath cut by the Ketchum, except by measurement, and this boasted length of cutting-bar is no merit in a mower, unless there is a commensurate gain in the power applied. For instance, if the six feet cutting bar, which made such an "awful gap in the tottering grass," requires one-third more power than Manny's, cutting four feet, then give us the latter; for horse-flesh is too expensive to waste for mere display, unless we can have the profits of mowing machines for compensation.

But the real question with our farmers—most of whom have but one horse—is this: can we have a mowing machine which will work in all kinds of grass and grain, which will adapt itself to uneven land, which will keep in repair, and which can be worked by an ordinary farm-horse? The trial on the field of Mr. Lamson did not decide any of these points. The draft was through a half-grown crop, and down a smooth inclined plane. "Truth and Justice" says the decision of those who witnessed the trial was in favor of Ketchum's. In reply, I answer, that several of Manny's patent were sold on the spot; while I know of none of Ketchum's that were disposed of. HONESTY.

For the New England Farmer.

STRIPES AND SPECKS IN BUTTER.

MR. EDITOR:—With an experience of twenty-five years in butter, I believe Mr. Holmes to be wholly mistaken as to the true cause of stripes and white specks in making it, as I always practised scraping down the cream that is thrown about the churn in churning, as soon as the butter began to come, and never have striped butter. If the butter is thoroughly churned, and well worked after churning, it will never be striped. I believe the cream that is scraped down from the sides and lid of the churn, most, if not all of it, comes to butter; if not, it goes in with the butter-milk, which only makes it the better for biscuit.

The white specks in butter are caused by getting milk in with the cream when skimming, which is suffered to lie still until it becomes hard like cheese; to prevent this, stir the cream thoroughly after skimming it off the milk; this will generally prevent there being specks in the butter. If the cream is strained after skimming it off, there will never be specks. If my theory be correct, it will be seen that the idea of cream making stripes or specks in butter is incorrect.

N. B.—Good butter-makers rarely have stripes or specks in their butter; if they do, they attribute the cause to the neglect of duty in not taking proper care of the cream, and properly working the butter. H.

Ludlow, Vt., June 25, 1859.

SUMMER PRUNING.

A Mr. Sweet, of Triftonburgh, Mass., writes to the Boston *Cultivator:* "Trees should never be pruned in the fall, for the reason that the stock dries up, the bark curls from the stock, lets in water, and injures the tree, and it never heals so well as when removed at the proper time. To prune in early spring is better, but not the best time. Limbs removed at this season of the year, when the sap first begins to start, also injures the trees, for the sap rushes with great power to every part of the tree, which will cause the wound to bleed. The tree, or limb, will turn black, and often the tree will die. I am satisfied that the best time to prune apple trees is from the last of June to the last of July. At this season of the year, that strong flow of sap begins to subside, the tree is covered with foliage, which is a great help to the wound in preventing its drying and cracking."

BUSINESS CHANGE.

On the first of July a change was made in the business management of the *Farmer*, by the relinquishment by Mr. Nourse of a third interest each to Mr. Russell P. Eaton and Mr. Albert Tolman. Mr. Eaton assumes the general editorial charge of the weekly *Farmer*, while Mr. Tolman will conduct the business affairs of the firm. No change whatever is made in the editorship of the monthly *Farmer*, or in the manner of carrying on the general business of the establishment. The announcement of the new firm will be found upon the cover of this month's issue.

For the New England Farmer.

MOWING MACHINES.

Mr. Editor:—I cut about seventy-five acres of land, and you will readily see that haying, with me, has been a long and tedious business. I tried several mowing machines, and found none that gave satisfaction, as a great part of our land is low, clay meadow, laid in beds four rods wide, and no machine would operate on this land, only one whose knife-bar played up and down, independent of the driving wheel. I was induced to try the Manny mower—and this has accomplished the work so near perfection that I have purchased, and am fully satisfied with its operation. I am not acquainted with the new machines, but I understand that this year there are many new and very good ones. One advantage that I notice in my machine is, the instant the grass is cut, the reel removes it from the finger-bar, while I have noticed that on machines that have no reel, when going with the wind, the grass stops upon the finger-bar. Upon close examination I have found that the grass in great quantities was cut as fine as powder, and good for nothing or wasted. My advice to farmers that have twenty or more acres of land to mow, is, first to find a good machine and then buy. Perhaps I am not at liberty to say the "Manny" is the best, but will say that it is a good machine, and in the experiment of last year I saved nearly the price of the machine. Joseph Brown.

Kensington, N. H., July, 1859.

For the New England Farmer.

THE PEAR MOTH.

The worm of the pear moth (*Tortrix angustiorana*) is now busy in some localities upon the young fruit of the pear, attacking it immediately under the crown or eye. This worm is about a quarter of an inch long, of a dirty green color, and reddish brown down the back. As a means of destroying this insect, it has been suggested to search for the maggots in the eye of the fruit, but the most rational way is to collect the leaves in autumn and burn them, as it is more probable that they lay their eggs upon these, or that the caterpillars spin webs in the chinks of the bark to undergo their transformations. If they hybernate in the latter, the best method to destroy them would be to paint over the bark with a mixture of strong soft soap and air-slaked lime. I have a few of these insects, taken from some young pears some days since; they had eaten holes in the fruit the size of a small pea.

Salem, June, 1859. J. M. L.

☞ Each plant, while growing, throws off certain matters which are not favorable to the growth of successive crops of the same plant. Plants in this respect are somewhat like animals, which always avoid their own excrements. Now, other plants may use these matters. Hence a rotation is profitable, because one crop may take up what another throws off.

LADIES' DEPARTMENT.

TO MAKE CURRANT WINE.

For several years we have made a ten gallon keg of currant wine, which is of as good quality as any we have tasted, and is generally so pronounced by those who have had an opportunity to judge. The mode of manufacture is simple, and can be easily followed by any family having the currants and the disposition to make the wine. For general information we give the receipt, and cordially recommend it.

The currants should be fully ripe when picked; put them into a large tub, in which they may remain a day or two; then crush them with the hands, unless you have a small patent cider-press, in which they should not be pressed too much, or the stems will be bruised and impart a disagreeable taste to the juice. If the hands are used, put the crushed fruit, after the juice has been poured off, in a cloth or sack and press out the remaining juice. Put the juice back in the tub after cleansing it, where it should remain for about three days, until the first stages of fermentation are over, and removing once or twice a day the scum copiously arising to the top. Then put the juice into a vessel—a demijohn, keg or barrel—of a size to suit the quantity to be made, and to each quart of juice, add three pounds of the best brown sugar, (we prefer this to the loaf,) and water sufficient to make a gallon.

Thus, ten quarts of juice and thirty pounds of sugar, will give you ten gallons of wine, and so on in that proportion. The cask must be full, and the bung or stopper left off till fermentation ceases, which will be in twelve or fifteen days. Meantime the cask must be filled up daily with water, as fermentation throws out the impure matter. When fermentation ceases, rack the wine off carefully, either from the spigot or by a syphon, and keep running all the time. Cleanse the cask thoroughly with boiling water, then return the wine, bung up tightly, and let it stand for four or five months, when it will be fit to drink, and can be bottled if desired.

All the vessels, casks, &c., should be perfectly sweet, and the whole operation should be done with an eye to cleanliness. In such event, every drop of brandy or other spirituous liquors added will detract from the flavor of the wine, and will not in the least degree increase its keeping qualities. Currant wine made in this way will keep for an age, unless it is—*drank.*—*Germantown Telegraph.*